SUMMIT
GEOENGINEERING SERVICES

SOIL PROBE LOG

Project:	Proposed Apartment Building	Boring #:	P-4
Location:	665 Congress St.	Project #:	15040
City, State:	Portland, ME	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	112.9 ft
Driller:	C. Coolidge, P.E.	Reference:	Site Survey by Titcomb Associates
Summit Staff:	M. Hardison, E.I.	Date started: 3/31/2015	Date Completed: 3/31/2015

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: N/A
Model: AMS Power Probe	Diameter: N/A
Method: 2-1/2" H.S.A.	Hammer: N/A
Hammer Style: Auto	Method: N/A

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/31/2015			

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
				PROBE		3.5" of Pavement		PAVEMENT
1						Auger refusal at 2', moved over and started new hole		0.3' FILL
2						Encountered dense drilling at 2' again in second hole, drilled past it. Dense driilling ecountered again at 4'. Likely rubble		
3								
4						End of Probe at 4.0', Auger refusal		4.0' RUBBLE
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL PROBE LOG

Project:	Proposed Apartment Building	Boring #:	P-5
Location:	665 Congress St.	Project #:	15040
City, State:	Portland, ME	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	112.3 ft
Driller:	C. Coolidge, P.E.	Reference:	Site Survey by Titcomb Associates
Summit Staff:	M. Hardison, E.I.	Date started: 3/31/2015	Date Completed: 3/31/2015

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	N/A
Model:	AMS Power Probe	Diameter:	N/A
Method:	2-1/2" H.S.A.	Hammer:	N/A
Hammer Style:	Auto	Method:	N/A

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/31/2015			

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
				PROBE		3" of Pavement		PAVEMENT
1				↓		Auger refusal at 9"', moved over and started new hole, encounered same refusal. Likely cobble		0.3'
2						End of Probe at 0.8', Auger refusal		0.8' COBBLE
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
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21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL PROBE LOG

Project:	Proposed Apartment Building	Boring #:	P-6
Location:	665 Congress St.	Project #:	15040
City, State:	Portland, ME	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	112.3 ft
Driller:	C. Coolidge, P.E.	Reference:	Site Survey by Titcomb Associates
Summit Staff:	M. Hardison, E.I.	Date started: 3/31/2015	Date Completed: 3/31/2015

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	N/A
Model:	AMS Power Probe	Diameter:	N/A
Method:	2-1/2" H.S.A.	Hammer:	N/A
Hammer Style:	Auto	Method:	N/A

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/31/2015			

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
				PROBE		2.5" of Pavement		PAVEMENT
1								0.2'
2						Auger cuttings: Black Sandy SILT, frequent brick fragments, little Clay and black Ash		FILL
3								
4								
5								
6						End of Probe at 5.0', Auger refusal		5.0'
7								BEDROCK
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL PROBE LOG

Project:	Proposed Apartment Building	Boring #:	P-101
Location:	665 Congress St.	Project #:	15040
City, State:	Portland, ME	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Great Works Test Boring	Boring Elevation:	116.4 ft
Driller:	Jeff Lee	Reference:	Site Survey by Titcomb Associates
Summit Staff:	M. Hardison, E.I.	Date started: 4/15/2015	Date Completed: 4/15/2015

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	N/A
Model:	Mobile B-53	Diameter:	N/A
Method	4" Solid Stem Auger	Hammer:	N/A
Hammer Style:	R&C	Method:	N/A

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
4/15/2015	-		None observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6" PROBE	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
						3" Pavement		PAVEMENT
1						Very difficult drilling, frequent rubbe encountered, refusal encountered in first hole at 4.5', moved over 1' to start new hole		0.25' +/- FILL
2								
3								
4								
5								
6								
7								
8								
9								
10						Smoother drilling started around 9', assumed transizion zone into native till		9' +/- GLACIAL TILL
11						End of Probe at 10.8', Auger refusal		10.8' BEDROCK
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL PROBE LOG

Boring #: **P-102**

Project:	Proposed Apartment Building	Project #:	15040
Location:	665 Congress St.	Sheet:	1 of 1
City, State:	Portland, ME	Chkd by:	

Drilling Co:	Great Works Test Boring	Boring Elevation:	111.9 ft
Driller:	Jeff Lee	Reference:	Site Survey by Titcomb Associates
Summit Staff:	M. Hardison, E.I.	Date started: 4/15/2015	Date Completed: 4/15/2015

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	24" SS
Model:	Mobile B-53	Diameter:	2"OD/1.5"ID
Method	4" Solid Stem Auger	Hammer:	140 lb
Hammer Style:	R&C	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
4/15/2015	-		None observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6" PROBE	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3" Pavement		PAVEMENT
2								
3						Smooth drilling throughout fill layer (no rubble/cobbles)		
4								
5								
6						Increased resistance at 4.8, potential till or soft rock		
7								
8								
9								
10								
11								
12								
13						End of Probe at 12.1', Auger refusal		12.1' BEDROCK
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL PROBE LOG

Project:	Proposed Apartment Building	Boring #:	P-103
Location:	665 Congress St.	Project #:	15040
City, State:	Portland, ME	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Great Works Test Boring	Boring Elevation:	112.3 ft
Driller:	Jeff Lee	Reference:	Site Survey by Titcomb Associates
Summit Staff:	M. Hardison, E.I.	Date started: 4/15/2015	Date Completed: 4/15/2015

DRILLING METHOD		SAMPLER	
Vehicle:	Tracked	Length:	24" SS
Model:	Mobile B-53	Diameter:	2"OD/1.5"ID
Method	4" Solid Stem Auger	Hammer:	140 lb
Hammer Style:	R&C	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
4/15/2015	-		None observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6" PROBE	N_{60}	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
						4" Pavement		PAVEMENT
1								0.3'
2						Relatively easy drilling, no rubbe/cobbles encountered		
3								
4								
5								
6								
7								
8								
9								
10						End of Probe at 9.6', Auger refusal		9.6' BEDROCK
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
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Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

Att. 7

ACORN
ENGINEERING, INC.

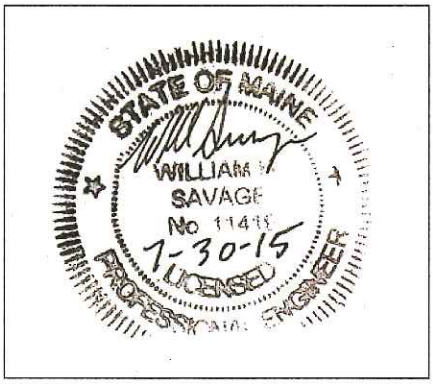
EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

Redfern Properties, LLC
667 Congress Street Redevelopment
Portland, Maine 04101

Prepared By:

Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104



July 2015

INTRODUCTION

Acorn Engineering, Inc. has been retained by Redfern Properties, LLC to provide civil engineering services for the proposed development of Joe's Variety Store. The proposed redevelopment project is located at 667 Congress Street (Map, Book, Lot 46 C020 and C019) bordered by Congress Street, Vernon Place, and Avon Street in Portland, Maine. The existing commercial building and parking lot are to be redeveloped to include:

- 1 Commercial Space on the first floor (approximately 4500 SF).
- 139 Residential Units on the upper seven floors.
- 44 Parking Spaces on the first floor off of Commercial Street and 37 spaces located below in a lower level parking garage.

The following Erosion and Sedimentation Control Report was developed in accordance with the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and the Maine DEP Chapter 500 Stormwater Management Appendix A and B (1), Amended January 11, 2015. This narrative also meets the standards required in the Maine DEP's Erosion & Sediment Control BMP's Manual, dated March 2003.

1.0 EXISTING CONDITIONS

The proposed redevelopment project is located at 667 Congress Street (Map, Book, Lot 46 C020 and C019) bordered by Congress Street, Vernon Place, and Avon Street in Portland, Maine. There is an existing smoke shop/variety store building and parking lot located within the project location which are to be demolished as part of the proposed project.

The City of Portland has rezoned the entire parcel as a B-3 zone due to its proximity to Commercial Street and Downtown Portland.

Abutting Uses:

- North — R-6 Zone – Single and Multi-Family Residential
- East — B-3 Zone – Green Hand Bookshop, Parking Lot
- Southwest — B-3 Zone – Boda/Bangkok Thai
- Northwest — R-6 Zone – Single and Multi-Family Residential
- South — B-3 Zone – Video Expo, Empire Theater, Barber Shop

The existing project area is made up of a single paved and gravel parking area with a single, existing building. The distribution of surfaces is as follows:

- Paved Surface: 81%
- Existing Building: 14%
- Gravel with Limited Overgrowth: 5%

All surfaces are impervious with an existing grade ranging from approximately 0-10%.

1.1 Existing Soils

Onsite soil information includes the following:

- Summit Geoengineering Services – Soil Boring Logs, dated March 31st, 2015 and April 15th, 2015. A formal Geotechnical Report has also been prepared by Summit Geoengineering Services for the project, dated May 2015.
- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County.

According to Summit Services, the soil at the site generally consists of pavement overlying fill overlying glacial till overlying weathered bedrock overlying bedrock. The pavement at the site was present at the location of all drilled borings and probes and ranged from 2.5" to 4.0" in thickness. The fill layer was encountered below all paved areas and ranged from loose to compact and humid to frozen. The glacial till layer was detected in primarily the Southwest corner and ranged from humid to damp and compact to dense. The weathered bedrock was encountered in the center of the property and was between 1.0 to 2.9 feet thick.

Given the soils information, listed above, and the fact that greater than 50% of the proposed development site is currently developed, it is Acorn Engineering's professional opinion that a more intense hydric soil boundary delineation is not required because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 are met.

The area within and surrounding the project includes soils types listed in the table below. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. Higher "K" values indicate more erodible soils.

Table 1 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Hinckley	.17	.17

The soil "K" values for the soils, listed above, indicate a low susceptibility to erosion. The site's susceptibility to erosion is from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County.

1.2 Existing Erosion Problems

Currently, the site is comprised of a developed paved and gravel parking lot with a single building.

1.3 Critical Areas

Critical areas that would require special attention during construction are the areas adjacent to the municipal stormwater system. This includes, but is not limited to, the catch basins located in the Northeast and Northwest corners of the property.

1.4 Protected Natural Resource

The client is not aware of the presence of any existing significant natural features located on the site as listed in Section 14-526 (b) 1. of the Land Use Code. The project is not located within a watershed classified as an Urban Impaired Stream by the Maine DEP.

1.5 Previous Construction Activity (5 years)

Acorn Engineering, Inc. is not aware of any construction related activities within the project limits within the past 5 years.

1.6 Timber Harvesting

Acorn Engineering, Inc. is not aware of any timber harvesting within the past five years.

2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

As part of the site development, the following temporary and permanent erosion and sedimentation control devices shall be implemented. Devices shall be installed as described in this report or within the plan set. See the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices for further reference.

2.1 Temporary Erosion Control Measures

The following temporary erosion and sedimentation control measures are planned for the project's construction period:

2.1.1 Crushed stone stabilized construction entrances shall be placed at all access points to the project site where there are disturbed areas. The following specifications shall be followed at a minimum:

- Stone size shall be 2-3 inches, or reclaimed or recycled concrete equivalent.
- The thickness of the entrance stone layer shall be no less than 6 inches.
- The entrance shall not be less than 20 feet wide, however not less than the full width of points where ingress or egress occurs. The length shall not be less than 50 feet in length.
- Geotextile fabric (woven or non-woven) shall be placed over the entire entrance area.
- The entrance/exit shall be maintained to the extent that it will prevent the tracking of sediment onto public road ways.

2.1.2 Siltation fence or erosion control berm shall be installed down gradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The silt fence or erosion control berm shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges, or

impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam.

2.1.3 Hay mulch including hydro seeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and November 1st on slopes of less than 15 percent shall be covered by fabric netting and anchored with staples in accordance with the manufacturer's recommendation. Mulch placed between November 1st and April 15th on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.

2.1.4 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.

2.1.5 Vernon Place, Avon Street, and Congress Street shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.

2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.

2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14 gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be "toed" into the ground.

2.1.8 Stormdrain inlet protection shall be provided to stormdrains through the use of any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter, gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached ½ the design height.

2.1.9 Dust control shall be accomplished by the use of any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.

2.1.10 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.

2.1.11 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7 day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.

2.1.12 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.

2.1.13 It is of the utmost importance that stormwater runoff and potential sediment from the construction site be diverted around the proposed underdrains until the trench is backfilled.

2.2 Permanent Erosion Control Measures

The following permanent erosion control measures are intended for post disturbance areas of the project.

2.2.1 All disturbed areas during construction, not subject to other proposed conditions, shall receive a minimum 4" of loam, limed, and mulched. Erosion control blankets or mats shall be placed over the mulch in areas noted in paragraph 4.1 of this report.
2.2.2 All stormwater devices shall be installed and tributary areas stabilized prior receiving stormwater.
2.2.3 Refer to the Maine Erosion and Sediment Control BMP manual for additional information.

3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The Erosion and Sedimentation Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion Control Details and Specifications are included in the plan set.

5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

Winter Construction consists of earthwork disturbance between the dates of November 1 and April 15. If a construction site is not stabilized with pavement, a road gravel base, 75% mature vegetation cover or riprap by November 15, then the site shall be protected with over-winter stabilization. Any area not stabilized with pavement, vegetation, mulching, erosion control mix, erosion control mats, riprap, or gravel base on a road shall be considered open.

The contractor shall limit the work area to areas that work will occur in during the subsequent 15 days and so that it can be mulched one day prior to a snow event. The contractor shall stabilize work areas prior to opening additional work areas to minimize areas without erosion control measures.

The following measures shall be implemented during winter construction periods:

5.1 Sediment Barriers

During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

5.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4 inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

5.3 Soil Stockpiling

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall.

5.4 Seeding

Between the dates of October 15th and April 1st, loam or seed shall not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until such time as the final treatment can be applied. If the date is after November 1st and if the exposed area has not been loamed, final grading with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs/1,000 s.f. All areas seeded during the winter shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

5.5 Over winter stabilization of disturbed soils

By September 15th, all disturbed soils on areas having a slope less than 15% shall be seeded and mulched. If the disturbed areas are not stabilized by this date, then one of the following actions shall be taken to stabilize the soil for late fall and winter:

- Stabilize the soil with temporary vegetation – By October 1st, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded

soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1st, then mulch the area for over-winter protection.

- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1st. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

- Stabilize the soil with mulch – By November 15th, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

5.6 Over winter stabilization of disturbed slopes

All stone-covered slopes shall be constructed and stabilized by November 15th. All slopes to be vegetated shall be seeded and mulched by September 1st. A slope is considered a grade greater than 15%. If a slope to be vegetated is not stabilized by September 1st, then one of the following action shall be taken to stabilize the slope for late fall and winter:

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1st the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% f the slope by November 1st, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.

- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1st. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15th. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15th. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion control measures. The frequency of inspection shall occur at least once every two weeks, as well as after a "storm event". A "storm event" shall consist 0.5 inches of rain within a 24 hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall inspected in the manner as described.

6.1 Sediment Barriers

Hay bale barriers, silt fences and filter berms shall be inspected and repaired for the following if there are any signs of erosion or sedimentation below them. If there are signs of undercutting at the center or the edges of the barrier, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits should be removed when deposits reach approximately one-half the height of the barrier. Filter berms should be reshaped as needed. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared and seeded.

6.2 Stabilized Stone Construction Entrances

The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material and redistributed on site in a stable manner. The entrance should then be reconstructed. The contractor shall sweep or wash pavement at exits, which have experienced mud-tracking on to the pavement or traveled way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or waterways.

6.3 Mulched Areas

All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied. Nets must be inspected after rain events for dislocation or failure. If washouts or breakage occur, re-install the nets as necessary after repairing damage to the slope. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

6.4 Dust Control

When temporary dust control measures are used, repetitive treatment shall be applied as needed to accomplish control.

6.5 Stormwater Appurtenances

All underdrains, storm drains, and catch basins need to be operating effectively and free of debris.

6.6 Erosion and Sedimentation Control Inspections:

Acorn Engineering has personnel qualified to conduct Erosion and Sedimentation Control Inspections. For further information contact:

Contact: Will Savage, PE
Telephone: (207) 775-2655

Qualifications:

- Maine Professional Engineering License #11419
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert #14
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI) Cert #0293
- Certified Professional in Erosion and Sediment Control (CPESC) Cert. #4620

The Contractor has sole responsibility for complying with the Erosion and Sedimentation Report/Plan, including control of fugitive dust. The Contractor shall be responsible for any monetary penalties resulting from failure to comply with these standards.

7.0 IMPLEMENTATION SCHEDULE

The following implementation sequence is intended to maximize the effectiveness of the above described erosion control measures. Contractors should avoid overexposing disturbed areas and limit the amount of stabilization area.

1. Install a stabilized construction entrance in all locations where construction traffic will enter and exit the site.
2. Install perimeter silt fence or erosion control berm.
3. Install all other erosion control devices as necessary throughout the remainder of this schedule.
4. Commence installation of drainage infrastructure.
5. Prioritize the downhill retaining and foundation walls to contain runoff within the site while providing an engineered outlet with siltation barrier to the municipal stormwater system within Avon.
6. Commence earthwork operations, wall and foundation installation.
7. Commence installation of utilities.
8. Continue earthwork and grading to subgrade as necessary for construction.
9. Complete installation of drainage infrastructure, as well as other utility work.
10. Complete remaining earthwork operations.
11. Install sub-base and base gravels in paved areas.
12. Install paving, curbing and brickwork.
13. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.

14. Once the site is stabilized, 90% catch of grass has been obtained, or mulching of landscape areas is complete remove all temporary erosion control measures.
15. Touch up areas without a vigorous catch of grass with loam and seed.
16. Complete site signage and striping.
17. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

The above implementation sequence should be generally followed by the site contractor. However, the contractor may construct several items simultaneously. The contractor shall submit to the owner a schedule of the completion of the work. If the contractor is to commence the construction of more than one item above, they shall limit the amount of exposed areas to those areas in which work is expected to be undertaken during the following 30 days.

The contractor shall re-vegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event. The contractor shall incorporate planned inlets and drainage systems as early as possible into the construction phase.

8.0 CONCLUSION

The above erosion control narrative is intended to minimize the development impact by implementing temporary and permanent erosion control measures. The contractor shall also refer to the Maine Erosion and Sediment Control BMP manual for additional information.

9.0 ATTACHMENTS

- Temporary Seeding Plan

TEMPORARY SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P2O5-K2O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of temporary seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.	Recommended Seeding Dates
Winter Rye	2.57	Aug-15 to Oct-1
Oats	1.84	Apr-1 to Jul-1 Aug-15 to Sep-15
Annual Ryegrass	0.92	Apr-1 to Jul-1
Sudangrass	0.92	May-15 to Aug-15
Perennial	0.92	Aug-15 to Sep-15

Mulching

Mulch shall be applied at a rate of 70 lbs – 90 lbs per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to temporary seeding and mulching.

Solid Waste Disposal

The owner, Redfern Properties, LLC, or their property management company shall be responsible for contracting with a private hauler for removal of solid waste and recyclable material generated from the 139 residential units and 1 commercial spaces. Acorn Engineering, Inc. has reached out to waste management facilities to obtain potential quotes and feasibility statements from solid waste companies. The proposed solid waste room is as noted on the Site Plan (C-10) and include:

- One 2-cubic yard container serviced 4x weekly (trash)
- One 2-cubic yard containers serviced 4x weekly (recycling)

OR

- Four 2-cubic yard containers serviced 4x weekly (trash only)
- Four 2-cubic yard containers serviced 4x weekly (recycling only)

Pickup will occur as indicated above (or as otherwise necessary) to maintain a clean waste storage area. The solid waste containers will be fully enclosed within the first floor of the development, and screened from the public view.

A C O R N Engineering, Inc. • PO Box 3372 • Portland • Maine • 04104
Voice: 207-775-2655 • Fax: 207-358-7979 • www.acorn-engineering.com

Written Request for Waivers

The existing commercial building and parking lot on 667 Congress St (Map, Book, Lot 46 C020 and C019) are to be redeveloped into a 139-unit residential and single unit commercial building with covered parking on the basement and first floors (81 total parking spaces). The existing business, Joe's Variety Store, will remain on the first floor with the upper seven floors consisting of studio, single bedroom, and double bedroom apartments for rent.

The following is a list of known project related waivers.

1. **City Standard Parking Size** – The applicant is requesting a waiver to increase the number of Compact Parking Spaces per Standard Parking Spaces (9' X 18'). Of the proposed 81 spaces, 41% are Standard spaces and 59% may be defined as Compact Parking. According to the Technical Standards the maximum allowable Compact spaces for this space is 16. However, in order to adhere to the required parking spaces for residential units, there must be more compact parking within the covered lots.

   Circulation of vehicles within the site has been performed using AutoTurn, a vehicle circulation CAD accessory, and simulations that include these design waivers have shown circulation to be possible.

2. **City Minimum Driveway Width** – The applicant is requesting a waiver for the required 20' wide driveway; the proposed driveway is 18' wide at the overhead door but is otherwise 20' wide after entering the building.

3. **Parking Lot Landscaping** – The applicant is requesting a waiver to the parking lot landscaping requirements to not include the suggested 33 trees for the 81 parking spaces; due to the covered nature of the parking lots in both the basement and first floor (too limited of open air on first floor for tree or shrub growth), it is not feasible to landscape these features. Therefore, the applicant is prepared to contribute an amount proportionate to the cost of required parking lot trees to the City of Portland Tree Fund.

A C O R N Engineering, Inc. • PO Box 3372 • Portland • Maine • 04104
Voice: 207-775-2655 • Fax: 207-358-7979 • www.acorn-engineering.com

4. **Street Trees** – The applicant is seeking a waiver to the street trees requirements. Due to limited sidewalk space along the Avon Street and Vernon Place street fronts, there will not be street trees along these walls. There will be 3 trees spaced between 30 – 45 feet along Congress Street as illustrated further in the preliminary drawings. In all, the design decreases the total required street trees from 16 to 3. However, this is an increase in total trees on the property from the original zero. The equivalent of 13 trees will be contributed to the City of Portland Tree Fund.

A C O R N Engineering, Inc. • PO Box 3372 • Portland • Maine • 04104
Voice: 207-775-2655 • Fax: 207-358-7979 • www.acorn-engineering.com

Att. 10

August 27, 2015

Shukria Wiar
Planner
City of Portland, Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

RE: 667 Congress Street Apartment Project

Dear Shukria Wiar:

Redfern Properties and its affiliates are well known to NBT Bank. I have worked with Redfern for nearly 10 years and have been directly involved in the financing of numerous successful projects. NBT Bank is providing financing for Redfern's current apartment project at 89 Anderson Street and is interested in entertaining financing for 667 Congress Street. We are looking forward to more substantive conversations as this project materializes.

Please feel free to contact me should you need any additional information. I can be reached at (207) 808-4486.

Sincerely,

Joe Delano
Vice President
NBT Bank Maine

Att. 11

NOTES;
1. SNOW MAY BE STORED WITHIN THE SNOW STORAGE AREAS ONLY.

2. SNOW SHALL BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE AS NECESSARY

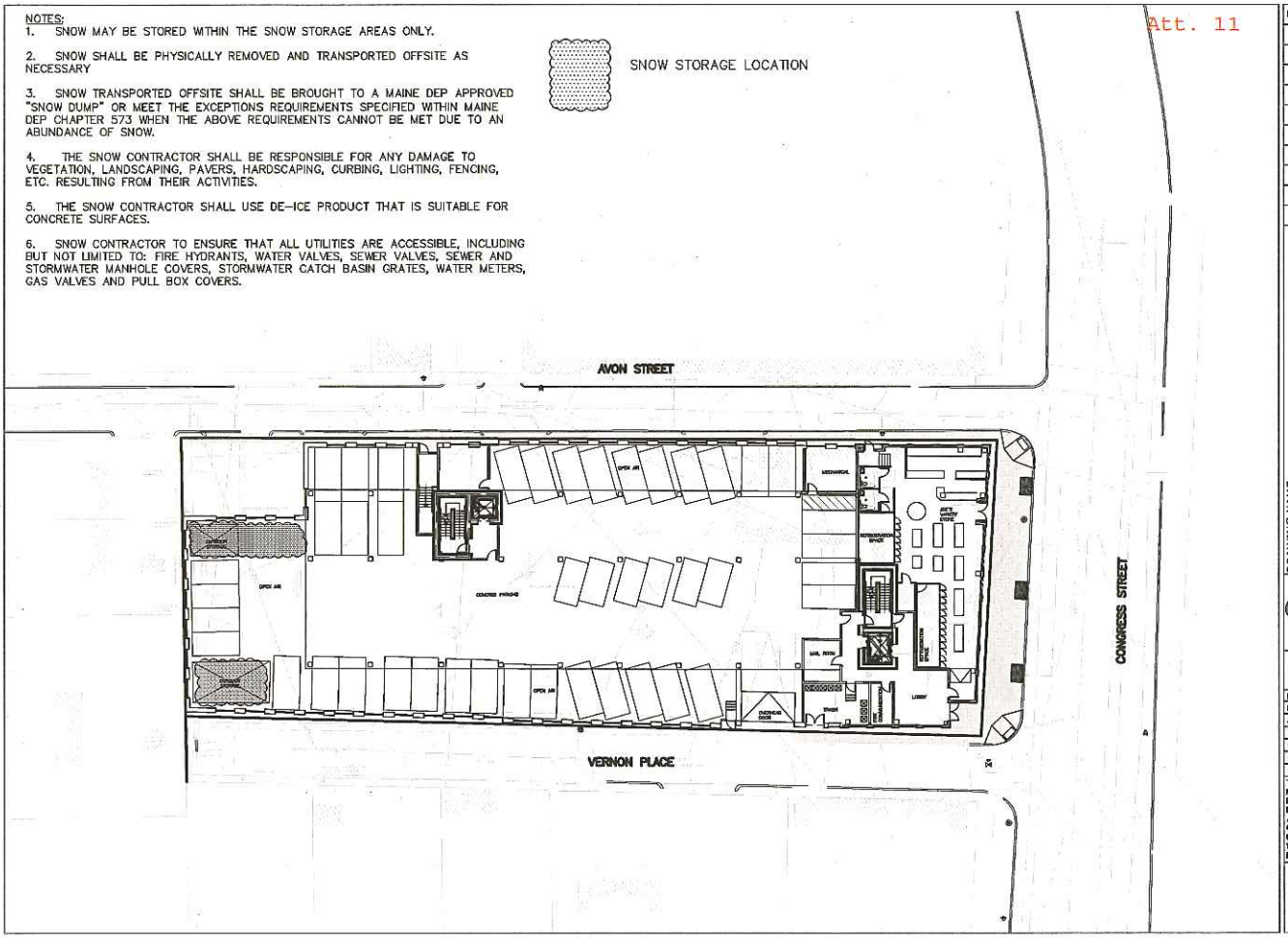
3. SNOW TRANSPORTED OFFSITE SHALL BE BROUGHT TO A MAINE DEP APPROVED "SNOW DUMP" OR MEET THE EXCEPTIONS REQUIREMENTS SPECIFIED WITHIN MAINE DEP CHAPTER 573 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW.

4. THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, PAVERS, HARDSCAPING, CURBING, LIGHTING, FENCING, ETC. RESULTING FROM THEIR ACTIVITIES.

5. THE SNOW CONTRACTOR SHALL USE DE-ICE PRODUCT THAT IS SUITABLE FOR CONCRETE SURFACES.

6. SNOW CONTRACTOR TO ENSURE THAT ALL UTILITIES ARE ACCESSIBLE, INCLUDING BUT NOT LIMITED TO: FIRE HYDRANTS, WATER VALVES, SEWER VALVES, SEWER AND STORMWATER MANHOLE COVERS, STORMWATER CATCH BASIN GRATES, WATER METERS, GAS VALVES AND PULL BOX COVERS.

SNOW STORAGE LOCATION



ISSUED FOR	BY DATE
REVISION	REV. DATE

DRAWING NAME: SNOW STORAGE PLAN

PROJECT NAME: 667 CONGRESS ST. REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC
P.O. BOX 3372
PORTLAND, MAINE 04104
(207) 775-2655

FILE:	1060_CIVIL
DATE:	7/29/15
JN:	1060
SCALE:	1"=20'
DESIGN BY:	WHS
DRAWN BY:	
CHECKED BY:	WHS

DRAWING NO.
SNOW

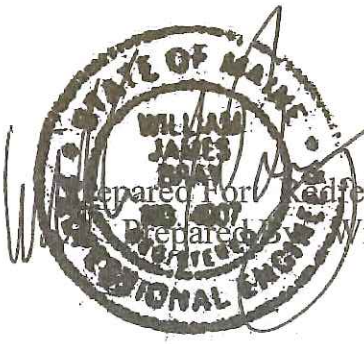
Att. 12a

TRAFFIC IMPACT STUDY

FOR

PROPOSED

667 CONGRESS STREET APARTMENTS



Prepared For: Kenfern Properties, LLC
Prepared By: William J. Bray, P.E.

August 2015

INTRODUCTION

Redfern Properties, LLC is proposing construction of an eight-story building at 667 Congress Street on a parcel of property bordered by Congress Street, Avon Street, and Vernon Place. The proposed project site currently includes Joe's Smoke Shop, a 3,673 square foot variety store located at the Congress Street/Avon Street corner of the parcel and surface parking encumbers the remainder of the property. The proposed project will provide a total of 139 apartment units that will include 34 efficiency units, 97 one-bedroom units, and 8 two-bedroom units. The basement floor provides a total of 37 parking spaces and will be accessed from Avon Street. A total of 44 spaces are proposed on the first floor of the building and will be accessed from Vernon Place. The proposed project also proposes a minor increase in floor area (approximately 856 square feet) to Joe's Smoke Shop.

It is anticipated that construction of the proposed project will be completed in early 2017.

The purpose of this study is to examine existing traffic conditions in the general vicinity of the proposed project, estimate the total number of site trips generated by the project, and make a determination as to whether the existing transportation system can safely accommodate the added traffic demand generated by the project.

EXISTING CONDITIONS

Existing Traffic: Manual turning movement counts were conducted during the week of May 5th at three study intersections per direction received from the City's Traffic Peer Review Consultant. The intersections included the following locations:

1. Congress Street/Avon Street
2. Congress Street/Vernon Place
3. Avon Street/Deering Street

All vehicular traffic entering each intersection was recorded in 15-minute intervals between the hours of 7:00 to 9:00 AM and between 3:00 to 6:00 PM (Copies of the field data summary sheets are attached). In addition, pedestrian and bicycle data was gathered at each location both directionally and by time of day. From a summary of the data, it was determined that the morning peak hour occurs between 8:00 and 9:00 AM at each study area location and the PM peak hour falls between 4:45 and 5:45 at both Avon Street locations and earlier (3:45 to 4:45 PM) at the Congress Street/Vernon Place intersection.

Traffic data collected during the month of May requires an adjustment to reflect "peak" travel conditions during the summer months of July and August. MaineDOT provides factors for adjusting traffic data collected during other periods of time. MaineDOT utilizes highway classifications of I, II, or III for all State and Local roadways. Group I roadways are defined as urban roadways or those roads that typically see commuter traffic and experience little fluctuation from week to week throughout the year. Group II roadways or arterial roads are those that see a combination of commuter and recreational traffic and; therefore, experience moderate fluctuations during the year. Group III roads or recreational roadways are typically used for recreational purposes and experience significant seasonal fluctuations. MaineDOT has designated the section of Congress Street, Avon Street, and Deering Street adjacent to the site as a Group 1 roadway, which requires the collected traffic data to be adjusted by a factor of approximately 1.057. Figures 1 and 2 illustratively depict the estimated 2015 PM design hour traffic conditions for the study intersections.

Bicycle and pedestrian volume totals recorded during the vehicular peak hour(s) at each study location are summarized in the following tables:

Bicycle Volumes
(Street Peak Hour)

Intersection/Approach	AM Peak Hour	PM Peak Hour
Congress St./Avon St.		
- Congress Street NB	17	20
- Congress Street SB	11	24
- Avon St.	2	3
Congress St./Vernon Pl.		
- Congress St. NB	13	13
- Congress St. SB	6	4
- Vernon Pl.	0	0
Avon St/Deering St.		
- Deering St. NB	4	1
- Deering St. SB	0	1
- Avon St. EB	1	4
- Avon St. WB	1	1

Overall, bicycle travel through the study intersections was somewhat moderate during both peak travel periods with slightly higher volumes recorded in the afternoon versus the morning peak. The highest volumes of bicycle trips were recorded traveling along the Congress Street corridor (a total of 44 two-way trips) in the evening peak hour with much lower volumes recorded on the secondary roadways during the same time period.

Pedestrian Volumes
(Street Peak Hour)

Intersection/Approach	AM Peak Hour	PM Peak Hour
Congress St./Avon St.		
- Crossing Congress North Approach	26	44
- Crossing Congress South Approach	8	4
- Crossing Avon Street	95	204
Congress St./Vernon Pl.		
- Crossing Congress - North Approach	18	23
- Crossing Congress South Approach	0	0
- Crossing Vernon Place	68	119
Avon St./Deering St.		
- Crossing Avon - East Approach	20	21
- Crossing Deering - North Approach	11	6
- Crossing Deering - South Approach	9	17
- Crossing Avon - West Approach	22	11

The volume of pedestrian movements recorded at each of the three study intersections was as expected, highest crossing the side street approaches at both Congress Street intersections. A total of 204 pedestrians crossed Avon Street at Congress Street in the evening peak hour and a total of 95 pedestrian trips were recorded for the same location in the morning peak hour. Slightly lower pedestrian movements were counted at the Vernon

Place/Congress Street intersection and significantly lower volumes were measured at the Avon Street/Deering Street intersection.

Existing Safety: The Maine Department of Transportation's (MaineDOT) Accident Records Section provided the latest three-year (2012 through 2014) crash data for the Study Area road sections and intersections. Their report is presented as follows:

2012 -2014 Traffic Accident Summary

Location	Total Crashes	Critical Rate Factor
1. Congress Street @ Avon Street	5	1.05
2. Congress Street @ Vernon Place	3	0.61
3. Congress Street @ State Street	25	0.81
4. Avon Street @ Deering Street	1	1.17
5. Congress Street btw. Avon St. and Vernon Pl.	1	0.55
6. Avon Street btw. Congress St. and Deering St.	1	1.60

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents***
- ***A Critical Rate Factor greater than 1.00***

As the data presented in the table shows, the incidence of traffic crashes occurring on the identified street network is below MaineDOT's threshold criteria for identification of a high crash location.

SITE TRAFFIC

Site Trip Generation: Trip generation for the proposed 139 apartment units was based upon trip tables presented in the eighth edition of the Institute of Transportation Engineers (ITE) "**TRIP GENERATION**" handbook. Trip generation of the increased building area to Joe's Smoke Shop variety store was estimated based upon actual manual traffic counts performed during both "peak" commuter time periods at the existing store site. Joe's Smoke Shop, located in a very densely populated section of the City of Portland, attracts a significant volume of "walk-in" trips from area residents versus the typical high percentage of automobile trips; therefore, trip rate information presented in the ITE publication inappropriately reflects actual conditions experienced at the existing neighborhood store. The following trip generation estimates were developed for both uses within the proposed building:

Apartment Units

Land-Use Code 223 – Mid-Rise Apartment (139 units)

Street Peak Hour – AM Peak = *0.30 trips/per unit*

Street Peak Hour – PM Peak = *0.39 trips/per unit*

Based upon the ITE trip rate information the proposed 139 apartment units can be expected to generate a total of **42** trips during the AM peak hour and a total of **54** trips during the PM peak hour.

Joe's Smoke Shop Variety Store

A manual traffic count was conducted at Joe's Smoke Shop variety store on Monday, August 9 between the hours of 7:00 and 9:00 AM and 3:00 to 6:00 PM. All vehicle, bicycle, and pedestrian trips entering and exiting the existing variety store were recorded in 15-minute intervals between the noted hours (Copies of the data is

attached). From a summary of the data, a "morning" and "afternoon" peak hour was determined for the store. The AM peak hour occurs between 7:45 and 8:45 AM and the evening peak hour falls between 4:15 and 5:15 PM. During the AM peak hour a total of 16 vehicle trips were recorded parking on Congress Street entering/exiting the store and during the evening peak hour a total 21 trips were observed entering/exiting the store.

Based upon the collected traffic data, it was determined that the existing 3,673 square foot Joe's Smoke Shop variety store generates approximately 4.36 vehicle trips per 1,000 square feet of floor area in the morning peak hour and 5.72 vehicle trips in the evening peak hour.

The proposed development project will increase the floor area of Joe's Smoke Shop by an additional 856 square feet of floor area, which based upon the exiting trip rates, will result in an increase of **4** vehicle trips in the morning peak hour and **5** trips during the afternoon peak hour.

Total Development Trip Generation
The proposed 667 apartment building project can be expected to generate a total of 46 vehicle trips in the AM peak hour and 59 trips during the PM peak hour.

Site Trip Distribution: The Institute of Transportation Engineers handbook provides the following directional distribution rates for an apartment unit for both peak hour time periods. Those rates are presented as follows:

AM Peak Hour	= 31% of trip enter site/69% exit
PM Peak Hour	= 58% of trips enter site/42% exit

Based upon the noted directional distribution patterns, 14 trips during the morning peak hour and 31 trips in the evening peak hour generated by the apartment units will enter the site and the remaining trips (28 AM trips and 23 PM trips) will exit the site.

Existing vehicle trip distribution patterns measured at Joe's Smoke Shop during both peak travel periods show generally an even split in distribution, with equal volumes entering and exiting the existing store.

Site Trip Assignment: In developing a travel forecast model for the proposed apartment building project the parking demand requirements of the proposed site and location of proposed tenant parking must be fully considered. A recent parking study completed by Gorrill-Palmer, Inc. in March of 2014 concluded that an average parking demand rate of 0.48 spaces per apartment unit appropriately meets the parking demand requirements of an apartment complex with the majority of the units either single bedroom or efficiency style units. The earlier Gorrill-Palmer report conservatively applied a parking demand rate of 0.70 spaces per unit in the conduct of their study. Accordingly, the traffic analysis completed for the proposed 667 Congress Street apartment project applied a similar per unit parking rate of 0.70 spaces per unit in developing the travel forecast for the project, resulting in a total parking demand requirement of 97 spaces.

NOTE: A detailed local parking utilization survey will be completed at a later date to more accurately define the appropriate parking demand of the proposed apartment project.

The proposed apartment building design provides a total of 81 parking spaces with 37 of the spaces located in the basement level of the building and the remaining 44 spaces on the first floor of the building. Three of the 81 total spaces are reserved for Joe's Smoke Shop resulting in a total of 78 spaces reserved for tenants of the building. Development of the trip assignment model assumes that the remaining 19 parking spaces (97 – 78) are located in undetermined locations nearby to the project site; and/or the actual parking demand of the project will be reduced by encouraging building tenants utilization of other modes of transportation other than

automobile travel. The building design presently includes a total of 56 covered bicycle spaces; a U share parking space and 2 to 4 motorcycle parking spaces; each special design feature, will assist in reducing the overall automobile usage of building tenants. Vehicle trips generated by the proposed project were assigned to the roadway system based upon the following percentages:

	AM Peak Hour	PM Peak Hour
Avon Street Site Garage Entrance	35%	35%
Vernon Place Site Garage Entrance	39%	39%
Congress Street Curb Spaces – Joe's Smoke Shop	9%	9%
Undetermined Locations Adjacent to Project Site	17%	17%

Figures 3 and 4 are line diagrams that depict the projected travel patterns of the site traffic for the AM and PM peak hours, respectively.

FUTURE TRAFFIC

Annual Growth: The Traffic Impact Study has been prepared based upon a projected build-out year of 2017. MaineDOT's historical traffic data for the noted sections of Congress Street near State Street would suggest the appropriateness of 3 to 4% percent annual growth rate. To project a conservative assessment of traffic impact, the 2015 design hour traffic volumes were increased by an annual growth rate of 4% per year to estimate 2017 travel conditions.

Other Development Traffic: Traffic generated by projects that have been approved by the Local Planning Board and/or the Maine Department of Transportation, yet are not opened, must be included in the estimate of pre-development traffic. At the direction of the City's Development Review Services Manager, trips generated by the proposed Avesta Housing's 37 unit apartment project at 17 Carleton Street were appropriately added to the base travel conditions forecast for Congress Street at both Avon Street and Vernon Place.

2017 Pre-Development Traffic: The 2015 design hour traffic projections shown on Figures 1 and 2 were increased by an annual growth rate of 4% per year to approximate 2017 travel conditions at each of the three study intersections. Figures 5 and 6 are line diagrams that present the 2017 Pre-Development AM and PM peak hour traffic forecasts for the three study intersections.

2017 Post-Development Traffic: Estimated 2017 Pre-Development traffic forecasts prepared for each study intersection, as depicted on Figures 5 and 6, were combined with the site traffic projections highlighted on Figures 3 and 4 to create estimated 2017 Post-Development traffic estimates for the study intersections. Figures 7 (AM Peak Hour) and 8 (PM Peak Hour) are line diagrams that present the estimated 2017 Post-Development traffic conditions for the study intersections.

MOBILITY ANALYSIS

A capacity analysis of the 2017 Pre and Post-Development traffic conditions were performed for the three study intersections utilizing the Synchro and SimTraffic computer models. Levels of Service rankings are similar to the academic grading system, where an "A" is very good with little delay and "F" represents very poor conditions.

The following table summarizes the relationship between delay and Level of Service for an unsignalized intersection:

Level of Service Criteria for Unsignalized Intersections

Level of Service	Total Control Delay (sec/veh)
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

The result of the capacity analysis is presented in the following table:

Level of Service Summary
2017 Pre and Post-Development Conditions

	2017 Pre-Development				2017 Post-Development			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection/Approach	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS
1. Congress Street @ Avon Street								
- Congress Street EB	1 second	A	1 second	A	1 second	A	1 second	A
- Congress Street WB	1 second	A	1 second	A	1 second	A	1 second	A
2. Congress Street @ Vernon Place								
- Congress Street EB	1 second	A	1 second	A	1 second	A	1 second	A
- Congress Street WB	1 second	A	1 second	A	1 second	A	1 second	A
- Vernon Place	5 second	A	5 second	A	5 second	A	6 second	A
3. Deering Street @ Avon Street								
- Deering Street EB	1 second	A	1 second	A	1 second	A	1 second	A
- Deering Street WB	1 second	A	1 second	A	1 second	A	1 second	A
- Avon Street	3 second	A	3 second	A	4 second	A	3 second	A

The results of the analyses shows that all approaches at each study intersection operates at the highest or "*best*" level of service.

SUMMARY

1. The proposed 139 unit apartment building project (that includes 34 efficiency, 97 one-bedroom, and 8 two-bedroom units) can be expected to generate approximately **42** vehicle trips during the morning peak commuter hour and a slightly higher volume of **54** vehicles in the evening peak hour. Additionally, the proposed minor expansion to Joe's Smoke Shop results in a minor increase in peak hour trips with **4** trips projected for the morning peak hour and a total of **5** trips in the evening peak hour. The minor volume of increased vehicle trips generated by Joe's Smoke Shop store are expected to continue utilizing the curb side parking spaces on Congress Street for access to the existing variety store.

2. The proposed apartment building design provides a total of 81 on-site parking spaces with 37 of the spaces located in the basement level of the building and the remaining 44 spaces on the first floor. Three of the 81 total spaces are reserved for Joe's Smoke Shop resulting in a total of 78 spaces remaining for use by tenants of the building.

3. MaineDOT's Traffic Safety Bureau's latest three-year safety report (2012 through 2014) for the identified sections of Congress Street, Deering Street, and Avon Street shows that all roadway segments and intersections experience fewer traffic crashes than the threshold criteria for identification of a high crash location.

4. The detailed intersection mobility assessment completed for 2017 Pre and Post-Development travel conditions documents that traffic generated by the proposed Redfern Properties, LLC apartment project has no measurable impact on traffic operations at each of the study intersections. Traffic is projected to operate at the highest or "*best*" level of service (Level of Service A) under either travel condition.

5. A detailed Transportation Demand Management Plan will be prepared for the proposed apartment building project in accordance with the City of Portland's requirements and submitted at a later date.

6. A detailed parking survey of similar residential apartment buildings in the City of Portland will be conducted to determine an appropriate parking demand rate for the proposed project. The City's Traffic Peer Review Engineer will be consulted in establishing the survey procedures, etc.

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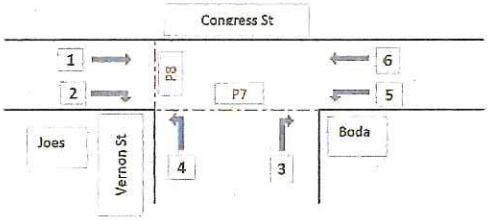
INTERSECTION PLAN
WITH NUMBERED MOVEMENTS:



Portland
Intersection: Congress St & Vernon St
Date: 5/5/15
Day of Week: Tuesday
Weather: Sunny
Remarks:

C= Bicycle Movement
P= Pedestrian Movement

Count Summary Movement

Start	End	1	2	3	4	5	6	7	8	9	10	11	12	Total	P7	P8	C1	C6
7:00	7:15	34	0	1	0	0	65	0	0	0	0	0	0	100	5	1	2	2
Truck Count		3	0	0	0	0	3							6				
Semi Count		0	0	0	0	0	0							0				
Bus Count		2	0	0	0	0	1							3				
7:15	7:30	46	1	1	1	0	75	0	0	0	0	0	0	124	8	2	3	0
Truck Count		1	0	0	0	0	0							1				
Semi Count		2	0	0	0	0	1							3				
Bus Count		1	0	0	0	0	3							4				
7:30	7:45	72	0	0	1	2	98	0	0	0	0	0	0	173	20	6	4	2
Truck Count		5	0	0	0	0	3							8				
Semi Count		0	0	0	0	0	0							0				
Bus Count		1	0	0	0	0	1							2				
7:45	8:00	52	0	1	0	1	84	0	0	0	0	0	0	138	11	1	0	6
Truck Count		2	0	0	0	0	4							6				
Semi Count		0	0	0	0	0	1							1				
Bus Count		3	0	0	0	0	3							6				
8:00	8:15	52	1	0	0	1	101	0	0	0	0	0	0	155	11	1	0	7
Truck Count		0	0	0	0	0	2							2				
Semi Count		0	0	0	0	0	0							0				
Bus Count		3	0	0	0	0	3							6				
8:15	8:30	55	0	1	0	2	104	0	0	0	0	0	0	162	25	4	1	1
Truck Count		3	0	0	0	0	2							5				
Semi Count		0	0	0	0	0	0							0				
Bus Count		1	0	0	0	0	2							3				
8:30	8:45	66	1	4	1	1	89	0	0	0	0	0	0	162	13	5	1	2
Truck Count		2	0	0	0	0	2							4				
Semi Count		0	0	0	0	0	0							0				
Bus Count		0	0	0	0	0	3							3				
8:45	9:00	51	1	3	2	7	100	0	0	0	0	0	0	164	19	4	2	3
Truck Count		0	0	0	0	0	0							0				
Semi Count		0	0	0	0	0	0							0				
Bus Count		3	0	0	0	0	3							6				

PEAK HOUR COUNT TIME: 8:00 TO: 9:00

236	3	8	3	11	411	0	0	0	0	0	0	672
249	3	9	3	12	434							

Adjusted volume

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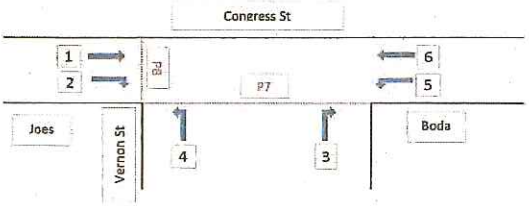
INTERSECTION PLAN
WITH NUMBERED MOVEMENTS:



Portland
Intersection: Congress St/Vernon St
Date: 5/5/15
Day of Week: Tuesday
Weather: Cloudy & Warm
Remarks:

C=Bicycle Movement
P=Pedestrian Movement

Count Summary Movement

Start	End	1	2	3	4	5	6	7	8	9	10	11	12	Total	P7	P8	C1	C2	C4	C5	C6
3:00	3:15	81	0	3	1	1	84	0	0	0	0	0	0	170	25	2	3	1	1	0	3
Truck Count		0	0	0	0	0	4							4							
Semi Count		0	0	0	0	0	0							0							
Bus Count		3	0	0	0	0	0							3							
3:15	3:30	81	1	1	1	0	92	0	0	0	0	0	0	176	34	3	6	0	0	0	2
Truck Count		0	0	0	0	0	2							2							
Semi Count		0	0	0	0	0	0							0							
Bus Count		2	0	0	0	0	4							6							
3:30	3:45	77	1	0	0	1	84	0	0	0	0	0	0	163	34	4	6	0	0	0	0
Truck Count		1	0	0	0	0	1							2							
Semi Count		0	0	0	0	0	0							0							
Bus Count		5	0	0	0	0	1							6							
3:45	4:00	76	0	1	1	2	83	0	0	0	0	0	0	163	31	5	4	0	1	0	5
Truck Count		2	0	0	0	0	0							2							
Semi Count		0	0	0	0	0	0							0							
Bus Count		3	0	0	0	0	3							6							
4:00	4:15	82	2	0	3	0	89	0	0	0	0	0	0	176	27	6	5	0	0	0	5
Truck Count		1	0	0	0	0	0							1							
Semi Count		0	0	0	0	0	0							0							
Bus Count		2	0	0	0	0	2							4							
4:15	4:30	84	0	0	0	2	89	0	0	0	0	0	0	175	37	7	3	0	0	0	5
Truck Count		1	0	0	0	0	0							1							
Semi Count		0	0	0	0	0	0							0							
Bus Count		1	0	0	0	0	1							2							
4:30	4:45	81	1	2	0	1	90	0	0	0	0	0	0	175	24	5	6	0	0	1	5
Truck Count		3	0	0	0	0	0							3							
Semi Count		2	0	0	0	0	0							2							
Bus Count		1	0	0	0	0	3							4							
4:45	5:00	69	0	2	3	1	88	0	0	0	0	0	0	163	19	4	6	0	0	0	7
Truck Count		0	0	0	0	0	2							2							
Semi Count		0	0	0	0	0	1							1							
Bus Count		2	0	0	0	0	1							3							
5:00	5:15	79	2	1	0	3	81	0	0	0	0	0	0	166	36	5	4	0	0	0	5
Truck Count		0	0	0	0	0	2							2							
Semi Count		0	0	0	0	0	0							0							
Bus Count		2	0	0	0	0	2							4							
5:15	5:30	82	2	2	0	1	86	0	0	0	0	0	0	173	48	3	6	0	0	0	1
Truck Count		1	0	0	0	0	3							4							
Semi Count		0	0	0	0	0	0							0							
Bus Count		2	0	0	0	0	1							3							
5:30	5:45	79	2	4	3	4	91	0	0	0	0	0	0	183	47	6	7	0	0	0	4
Truck Count		1	0	0	0	0	1							2							
Semi Count		0	0	0	0	0	0							0							
Bus Count		1	0	0	0	0	0							1							
5:45	6:00	73	2	0	1	2	90	0	0	0	0	0	0	168	30	7	8	1	0	0	1
Truck Count		2	0	0	0	0	0							2							
Semi Count		0	0	0	0	0	0							0							
Bus Count		2	0	0	0	0	3							5							

PEAK HOUR COUNT TIME: 3:45 TO: 4:45

339	3	3	4	5	360	0	0	0	0	0	0	714
358	3	3	4	5	381							

Adjusted Volume

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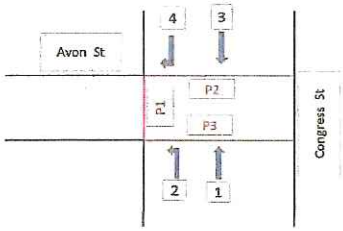
INTERSECTION PLAN
WITH NUMBERED MOVEMENTS:



Portland
Intersection: Congress St/Avon St
Date: 5/6/15
Day of Week: Wednesday
Weather: Sunny
Remarks:

C= Bicycle Movement
P= Pedestrian Movement

Count Summary Movement

Start	End	1	2	3	4	5	6	7	8	9	10	11	12	Total	P1	P2	P3	C1	C2	C3	C4
7:00	7:15	51	1	25	2	0	0	0	0	0	0	0	0	79	14	3	1	4	0	4	0
Truck Count		1	0	2	0									3							
Semi Count		0	0	1	0									1							
Bus Count		1	0	1	0									2							
7:15	7:30	60	1	40	0	0	0	0	0	0	0	0	0	101	21	7	2	4	0	3	0
Truck Count		1	0	2	0									3							
Semi Count		2	0	0	0									2							
Bus Count		3	0	1	0									4							
7:30	7:45	90	2	71	1	0	0	0	0	0	0	0	0	164	23	4	1	5	0	3	0
Truck Count		1	0	3	1									5							
Semi Count		0	0	0	0									0							
Bus Count		2	0	1	0									3							
7:45	8:00	88	1	39	0	0	0	0	0	0	0	0	0	128	16	6	5	3	0	2	0
Truck Count		2	0	1	0									3							
Semi Count		0	0	0	0									0							
Bus Count		2	0	1	0									3							
8:00	8:15	90	7	62	0	0	0	0	0	0	0	0	0	159	23	4	2	2	0	3	1
Truck Count		2	0	1	0									3							
Semi Count		0	0	0	0									0							
Bus Count		2	0	5	0									7							
8:15	8:30	116	0	55	0	0	0	0	0	0	0	0	0	171	25	4	0	6	1	1	0
Truck Count		1	1	4	0									6							
Semi Count		0	0	0	0									0							
Bus Count		2	0	1	0									3							
8:30	8:45	111	5	60	1	0	0	0	0	0	0	0	0	177	26	7	3	5	0	4	0
Truck Count		2	2	1	0									5							
Semi Count		1	0	0	0									1							
Bus Count		2	0	0	0									2							
8:45	9:00	96	4	58	1	0	0	0	0	0	0	0	0	159	21	11	3	4	0	4	0
Truck Count		3	0	4	0									7							
Semi Count		2	0	0	0									2							
Bus Count		3	0	3	0									6							

PEAK HOUR COUNT TIME: 8:00 TO: 9:00

433	19	254	2	0	0	0	0	0	0	0	0	708
458	20	268	2	0	0	0	0	0	0	0	0	

Adjusted volume

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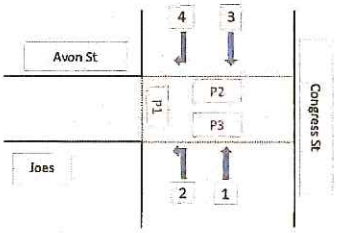
INTERSECTION PLAN
WITH NUMBERED MOVEMENTS:



Portland
Intersection: Congress St/Avon St
Date: 5/6/15
Day of Week: Wednesday
Weather: Nice
Remarks:

C=Bicycle Movement
P=Pedestrian Movement

Count Summary Movement

Start	End	1	2	3	4	5	6	7	8	9	10	11	12	Total	P1	P2	P3	C1	C2	C3	C4
3:00	3:15	85	2	76	2	0	0	0	0	0	0	0	0	165	54	10	2	1	0	5	0
Truck Count		0	0	1	0									1							
Semi Count		0	0	0	0									0							
Bus Count		1	0	2	0									3							
3:15	3:30	95	3	83	1	0	0	0	0	0	0	0	0	182	46	14	7	3	0	3	1
Truck Count		1	0	0	0									1							
Semi Count		0	0	0	0									0							
Bus Count		5	0	2	0									7							
3:30	3:45	93	2	73	4	0	0	0	0	0	0	0	0	172	43	7	3	6	0	6	0
Truck Count		0	0	0	0									0							
Semi Count		0	0	0	0									0							
Bus Count		0	0	3	0									3							
3:45	4:00	101	5	71	0	0	0	0	0	0	0	0	0	177	47	13	4	3	0	5	0
Truck Count		1	0	0	0									1							
Semi Count		0	0	0	0									0							
Bus Count		2	0	3	0									5							
4:00	4:15	85	1	78	2	0	0	0	0	0	0	0	0	166	53	6	0	2	0	3	0
Truck Count		2	0	3	0									5							
Semi Count		0	0	0	0									0							
Bus Count		1	0	2	0									3							
4:15	4:30	88	2	74	0	0	0	0	0	0	0	0	0	164	49	8	1	2	0	4	0
Truck Count		1	0	1	1									3							
Semi Count		1	0	0	0									1							
Bus Count		2	0	2	0									4							
4:30	4:45	84	6	75	1	0	0	0	0	0	0	0	0	166	46	12	1	2	0	11	0
Truck Count		3	0	0	0									3							
Semi Count		0	0	0	0									0							
Bus Count		3	0	0	0									3							
4:45	5:00	90	4	78	1	0	0	0	0	0	0	0	0	173	38	10	2	4	0	6	0
Truck Count		2	0	0	0									2							
Semi Count		0	0	0	0									0							
Bus Count		2	0	0	0									2							
5:00	5:15	100	3	89	3	0	0	0	0	0	0	0	0	195	60	13	0	8	0	9	0
Truck Count		0	0	2	0									2							
Semi Count		0	0	0	0									0							
Bus Count		1	0	0	0									1							
5:15	5:30	108	4	95	1	0	0	0	0	0	0	0	0	208	65	15	1	5	0	4	0
Truck Count		1	0	1	0									2							
Semi Count		0	0	0	0									0							
Bus Count		2	0	0	0									2							
5:30	5:45	85	2	80	0	0	0	0	0	0	0	0	0	167	41	6	1	4	2	5	0
Truck Count		3	0	0	0									3							
Semi Count		0	0	0	0									0							
Bus Count		1	0	1	0									2							
5:45	6:00	87	1	81	1	0	0	0	0	0	0	0	0	170	55	23	3	3	1	6	0
Truck Count		0	0	0	0									0							
Semi Count		0	0	0	0									0							
Bus Count		1	0	1	0									2							

PEAK HOUR COUNT **TIME:** 4:45 **TO:** 5:45

395	13	346	5	0	0	0	0	0	0	0	0	759
Adjusted Volume	418	14	366	5	0	0	0	0	0	0	0	0

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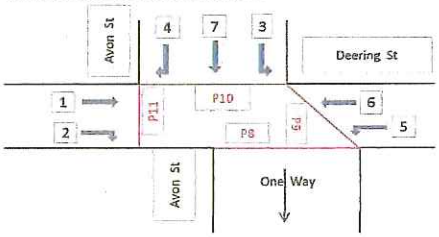
INTERSECTION PLAN
WITH NUMBERED MOVEMENTS:



Portland
Intersection: Deering St/Avon St
Date: 5/6/15
Day of Week: Wednesday
Weather: Sunny
Remarks: 7:30-7:45 2 Cyclists went the wrong way on Avon St
7:45-8:00 1 Cyclist went the wrong way on Avon St
8:15-8:30 1 Cyclist went the wrong way on Avon St

C= Bicycle Movement
P= Pedestrian Movement

Count Summary Movement

Start	End	1	2	3	4	5	6	7	8	9	10	11	12	Total	P8	P9	P10	P11	C2	C5	C6	C7
7:00	7:15	6	0	0	2	1	6	1	0	0	0	0	0	16	3	0	1	0	0	0	0	0
Truck Count		0	0	0	0	0	0	1						1								
Semi Count		0	0	0	0	0	0	0						0								
Bus Count		0	0	0	0	0	0	0						0								
7:15	7:30	5	0	1	0	1	3	0	0	0	0	0	0	10	2	1	6	3	0	0	0	1
Truck Count		0	0	0	0	0	0	0						0								
Semi Count		0	0	0	0	0	0	0						0								
Bus Count		0	0	0	0	0	0	0						0								
7:30	7:45	4	2	0	1	4	9	0	0	0	0	0	0	20	4	3	6	3	0	0	0	0
Truck Count		0	0	1	0	0	0	0						1								
Semi Count		0	0	0	0	0	0	0						0								
Bus Count		0	0	0	0	0	0	0						0								
7:45	8:00	8	1	0	0	4	9	1	0	0	0	0	0	23	4	3	9	4	0	0	0	0
Truck Count		0	0	0	0	0	0	0						0								
Semi Count		0	0	0	0	0	0	0						0								
Bus Count		0	0	0	0	0	0	0						0								
8:00	8:15	7	1	0	3	2	6	3	0	0	0	0	0	22	7	3	6	3	0	0	0	1
Truck Count		0	0	0	0	0	0	0						0								
Semi Count		0	0	0	0	0	0	0						0								
Bus Count		0	0	0	0	0	0	0						0								
8:15	8:30	8	0	0	0	3	6	0	0	0	0	0	0	17	6	2	5	2	1	1	1	1
Truck Count		1	0	0	0	0	0	1						2								
Semi Count		0	0	0	0	0	0	0						0								
Bus Count		0	0	0	0	0	0	0						0								
8:30	8:45	4	3	0	4	9	7	0	0	0	0	0	0	27	4	2	7	2	0	0	1	0
Truck Count		0	0	0	0	1	0	2						3								
Semi Count		0	0	0	0	0	0	0						0								
Bus Count		0	0	0	0	0	0	0						0								
8:45	9:00	2	1	0	2	3	21	1	0	0	0	0	0	30	3	1	4	1	0	0	2	0
Truck Count		0	0	0	0	0	0	0						0								
Semi Count		0	0	0	0	0	0	0						0								
Bus Count		0	0	0	0	0	0	0						0								

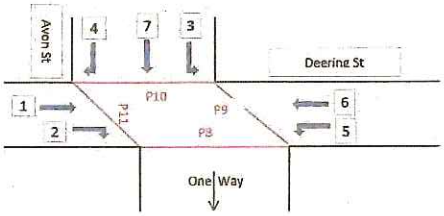
PEAK HOUR COUNT TIME: 8:00 TO: 9:00

22	5	0	9	18	40	7	0	0	0	0	0	101

Adjusted Volumes 24 5 0 10 19 42 7 0 0 0 0 0

Traffic Solutions
William J. Bray, P.E.
235 Bancroft Street
Portland, ME 04102
(207) 774-3603
(207) 400-6890 mobile
trafficsolutions@maine.rr.com

INTERSECTION PLAN
WITH NUMBERED MOVEMENTS:



Portland
Intersection: Deering St/Avon St
Date: 5/6/15
Day of Week: Wednesday
Weather: Nice
Remarks: 4:15-4:30 1 Cyclist went the wrong way on Avon St
5:00-5:15 1 Cyclist went the wrong way on Avon St

C=Bicycle Movement
P=Pedestrian Movement

Count Summary Movement

Start	End	1	2	3	4	5	6	7	8	9	10	11	12	Total	P8	P9	P10	P11	C1	C2	C4	C5	C6	C7
3:00	3:15	6	2	0	3	3	5	0	0	0	0	0	0	19	0	0	3	2	0	0	0	0	0	0
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
3:15	3:30	7	3	0	2	4	8	2	0	0	0	0	0	26	3	4	3	4	1	0	0	0	0	1
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
3:30	3:45	4	3	2	1	3	9	1	0	0	0	0	0	23	4	4	3	2	0	0	0	0	1	0
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
3:45	4:00	3	2	0	1	5	11	4	0	0	0	0	0	26	3	5	0	3	0	0	0	0	0	0
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
4:00	4:15	5	2	0	1	6	12	2	0	0	0	0	0	28	7	5	6	1	0	1	0	0	0	2
Truck Count		0	0	0	0	0	1	0						1										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
4:15	4:30	2	1	0	0	1	8	1	0	0	0	0	0	13	6	3	5	1	0	0	0	0	0	1
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
4:30	4:45	3	6	1	1	1	6	4	0	0	0	0	0	22	7	5	4	1	0	0	0	0	2	0
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
4:45	5:00	5	3	0	2	9	13	1	0	0	0	0	0	33	3	5	2	1	0	0	0	0	0	0
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
5:00	5:15	5	5	3	2	2	5	2	0	0	0	0	0	24	5	5	9	3	0	0	0	0	0	0
Truck Count		1	0	0	0	0	0	0						1										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
5:15	5:30	5	0	2	3	5	7	0	0	0	0	0	0	22	7	2	3	1	1	0	0	0	1	0
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
5:30	5:45	7	4	0	1	8	9	1	0	0	0	0	0	30	6	5	5	1	0	1	2	0	0	0
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										
5:45	6:00	5	1	1	0	4	13	2	0	0	0	0	0	26	8	6	6	5	0	0	1	0	0	0
Truck Count		0	0	0	0	0	0	0						0										
Semi Count		0	0	0	0	0	0	0						0										
Bus Count		0	0	0	0	0	0	0						0										

PEAK HOUR COUNT TIME: 4:45 TO: 5:45

23	12	5	8	24	34	4	0	0	0	0	0	110
24	13	5	9	25	36	4	0	0	0	0	0	

Adjusted Volume

Turn by Turn Traffic Data Services
P.O. Box 1203
Westbrook, Maine 04098

Joes Smoke Shop: Congress St Portland
Monday August 10, 2015
Sunny
Count by: Dawn-Marie Fahey

File Name : Portland, Joes Smoke Shop 081015
Site Code : 00001234
Start Date : 8/10/2015
Page No : 5

	Exit From East		Enter From West		
Start Time	Thru	App. Total	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 07:45 AM					
07:45 AM	2	2	3	3	5
08:00 AM	2	2	2	2	4
08:15 AM	1	1	2	2	3
08:30 AM	3	3	1	1	4
Total Volume	8	8	8	8	16
% App. Total	100		100		
PHF	.667	.667	.667	.667	.800

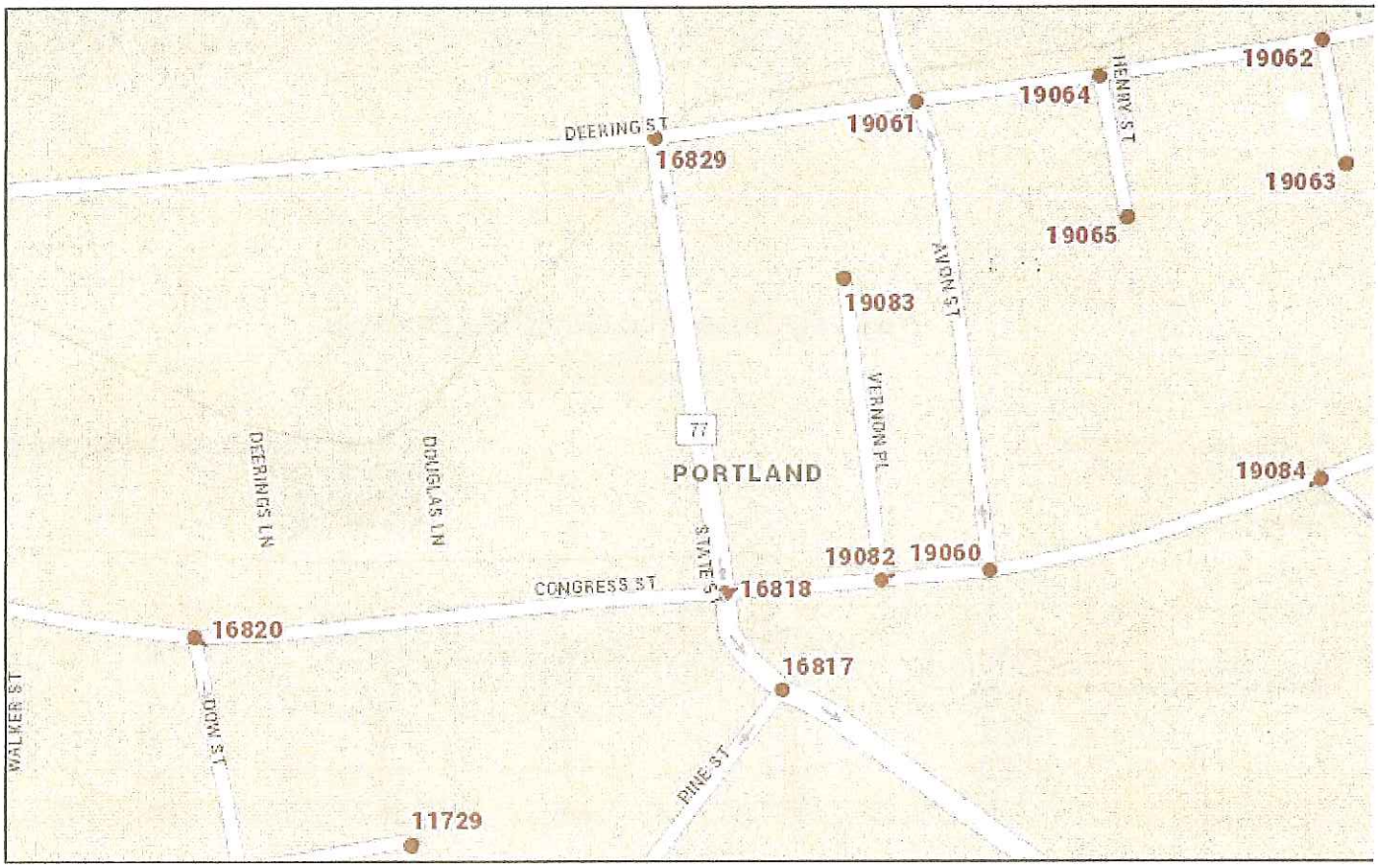
Turn by Turn Traffic Data Services
P.O. Box 1203
Westbrook, Maine 04098

Portland: Joes Smoke Shop
Monday August 10, 2015
Sunny
Count by:Patrick Frie

File Name : Portland, Joes Smoke Shop 081015 pm
Site Code : 00000003
Start Date : 8/10/2015
Page No : 5

	Exit From East		Entrance From West		
Start Time	Thru	App. Total	Thru	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 04:15 PM					
04:15 PM	4	4	4	4	8
04:30 PM	2	2	3	3	5
04:45 PM	2	2	2	2	4
05:00 PM	3	3	1	1	4
Total Volume	11	11	10	10	21
% App. Total	100		100		
PHF	.688	.688	.625	.625	.656

Default title from Map Document



Nodes - 3

Date: 7/29/2015
Time: 7:09:41 AM

0 0.005 0.01 0.02 0.03 0.04
Miles

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
19060	0560160 - 1.58	Int of AVON ST, CONGRESS ST	2	5	0	0	1	1	3	40.0	4.301	0.39	0.37	1.05
												Statewide Crash Rate:	0.14	
19082	0560160 - 1.60	Int of CONGRESS ST VERNON PL	2	3	0	0	0	0	3	0.0	4.563	0.22	0.36	0.00
												Statewide Crash Rate:	0.14	
16818	0560160 - 1.63	Int of CONGRESS ST, STATE ST	9	25	0	0	2	3	20	20.0	9.904	0.84	1.03	0.00
												Statewide Crash Rate:	0.66	
19083	0560755 - 0.05	End of VERNON PL	2	0	0	0	0	0	0	0.0	0.072	0.00	-0.10	0.00
												Statewide Crash Rate:	0.14	
19061	0560030 - 0.07	0509481 POR,DEERING,AVON ST.	2	1	0	0	0	1	0	100.0	0.477	0.70	0.60	1.17
												Statewide Crash Rate:	0.14	
Study Years: 3.00		NODE TOTALS:		34	0	0	3	5	26	23.5	19.317	0.59	0.61	0.96

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ Crash Summary I ☑ Section Detail ☑ Crash Summary II ☐ 1320 Public ☐ 1320 Private ☑ 1320 Summary

REPORT DESCRIPTION

Congress St Avon St area in Portland

REPORT PARAMETERS

Year 2012, Start Month 1 through Year 2014 End Month: 12

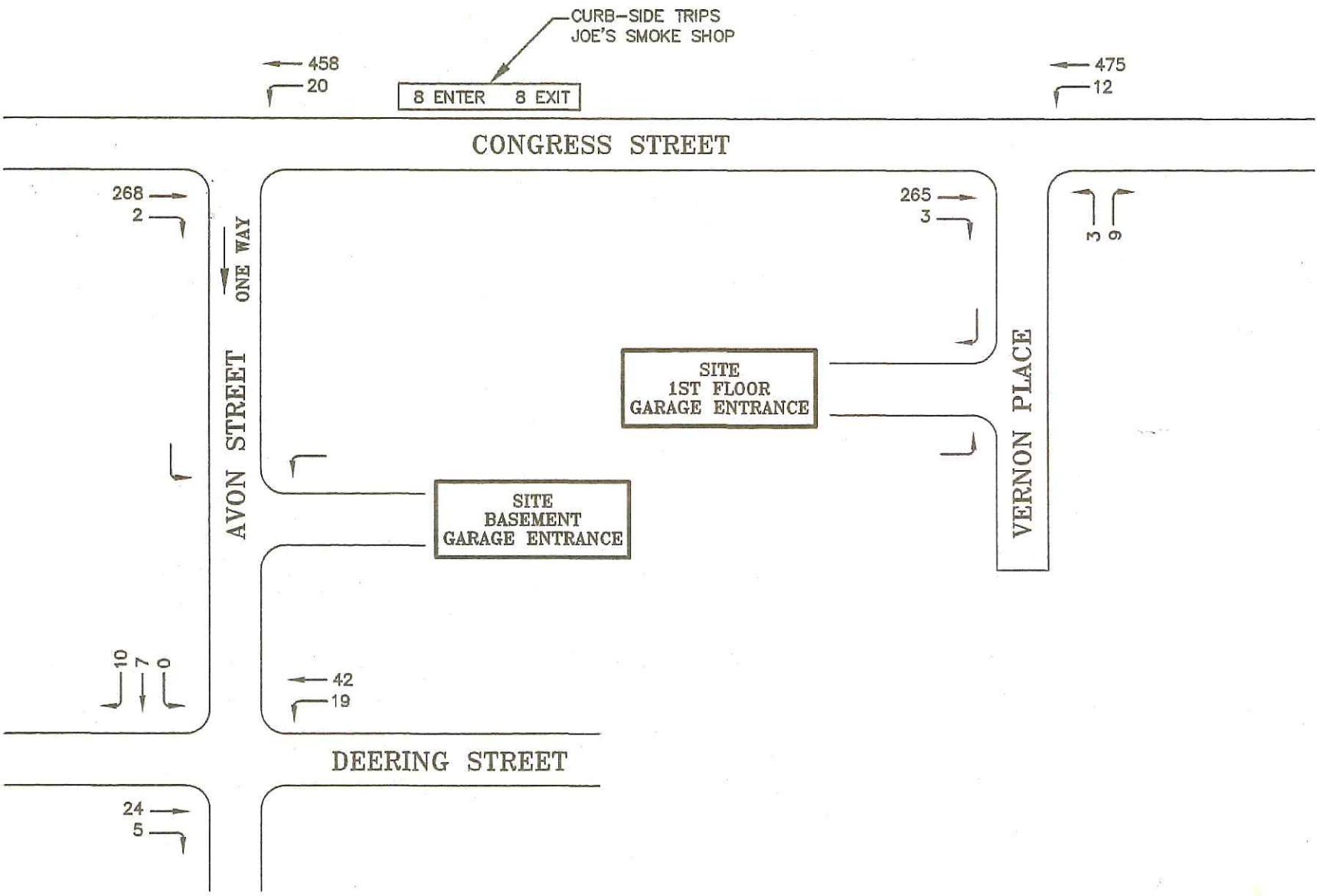
Route: **0560160**	Start Node: **19060**	Start Offset: **0**	☐ Exclude First Node
	End Node: **16818**	End Offset: **0**	☐ Exclude Last Node
Route: **0560755**	Start Node: **19082**	Start Offset: **0**	☑ Exclude First Node
	End Node: **19083**	End Offset: **0**	☐ Exclude Last Node
Route: **0560030**	Start Node: **19061**	Start Offset: **0**	☐ Exclude First Node
	End Node: **19060**	End Offset: **0**	☑ Exclude Last Node

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Sections

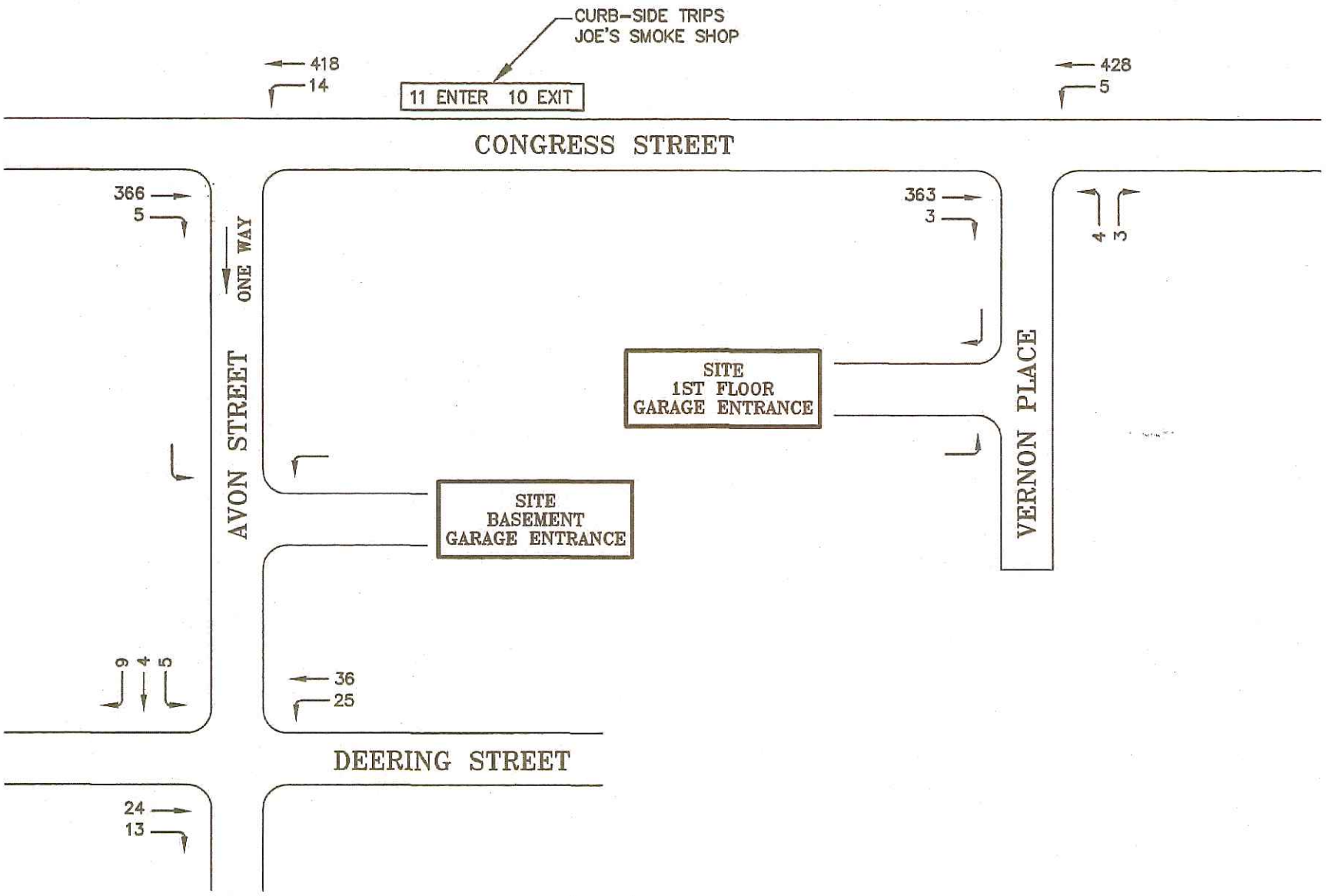
Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
19060	19082	3122302	0 - 0.02	0560160 - 1.58	0.02	2	1	0	0	0	0	1	0.0	0.00087	385.20	695.12	0.00
Int of AVON ST, CONGRESS ST				RD INV 05 60160											Statewide Crash Rate: 190.29		
16818	19082	3121769	0 - 0.03	0560160 - 1.60	0.03	2	0	0	0	0	0	0	0.0	0.00140	0.00	619.93	0.00
Int of CONGRESS ST, STATE ST				RD INV 05 60160											Statewide Crash Rate: 190.29		
19082	19083	194796	0 - 0.05	0560755 - 0	0.05	2	0	0	0	0	0	0	0.0	0.00007	0.00	1370.57	0.00
Int of CONGRESS ST	VERNON PL			RD INV 05 60755											Statewide Crash Rate: 359.82		
19060	19061	194773	0 - 0.08	0560030 - 0.07	0.08	2	1	0	0	0	0	1	0.0	0.00013	2492.47	1553.10	1.60
Int of AVON ST, CONGRESS ST				RD INV 05 60030											Statewide Crash Rate: 359.82		
Study Years: 3.00				**Section Totals:**	0.18		2	0	0	0	0	2	0.0	0.00247	270.14	564.95	0.48
				Grand Totals:	0.18		36	0	0	3	5	28	22.2	0.00247	4862.56	760.90	6.39



2015 DESIGN HOUR TRAFFIC
AM PEAK HOUR
FIGURE 1

E:\LAND PROJECTS\34000\344300 TRAFFIC SOLUTIONS\667 CONGRESS ST\PLANSET\667CONGRESS ST.DWG

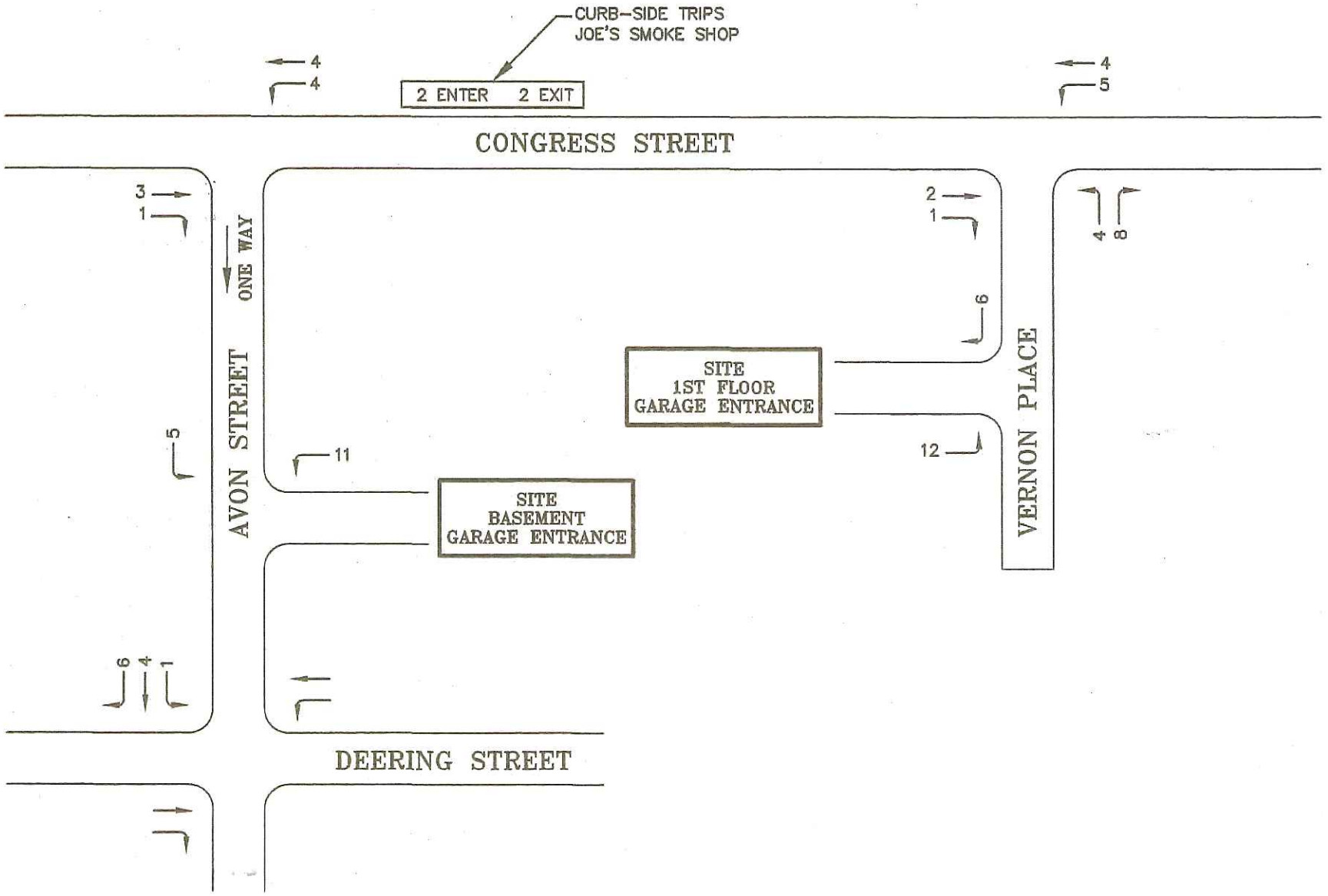
667 CONGRESS STREET APARTMENT BLDG PORTLAND, MAINE	TRAFFIC SOLUTIONS 235 BANCROFT STREET, PORTLAND, MAINE 04102-1720
DATE: AUGUST 12, 2015	FIGURE: 1



2015 DESIGN HOUR TRAFFIC
PM PEAK HOUR
FIGURE 2

E:\LAND PROJECTS\34000\34439 TRAFFIC SOLUTIONS\667 CONGRESS ST\PLANSET\667CONGRESS ST.DWG

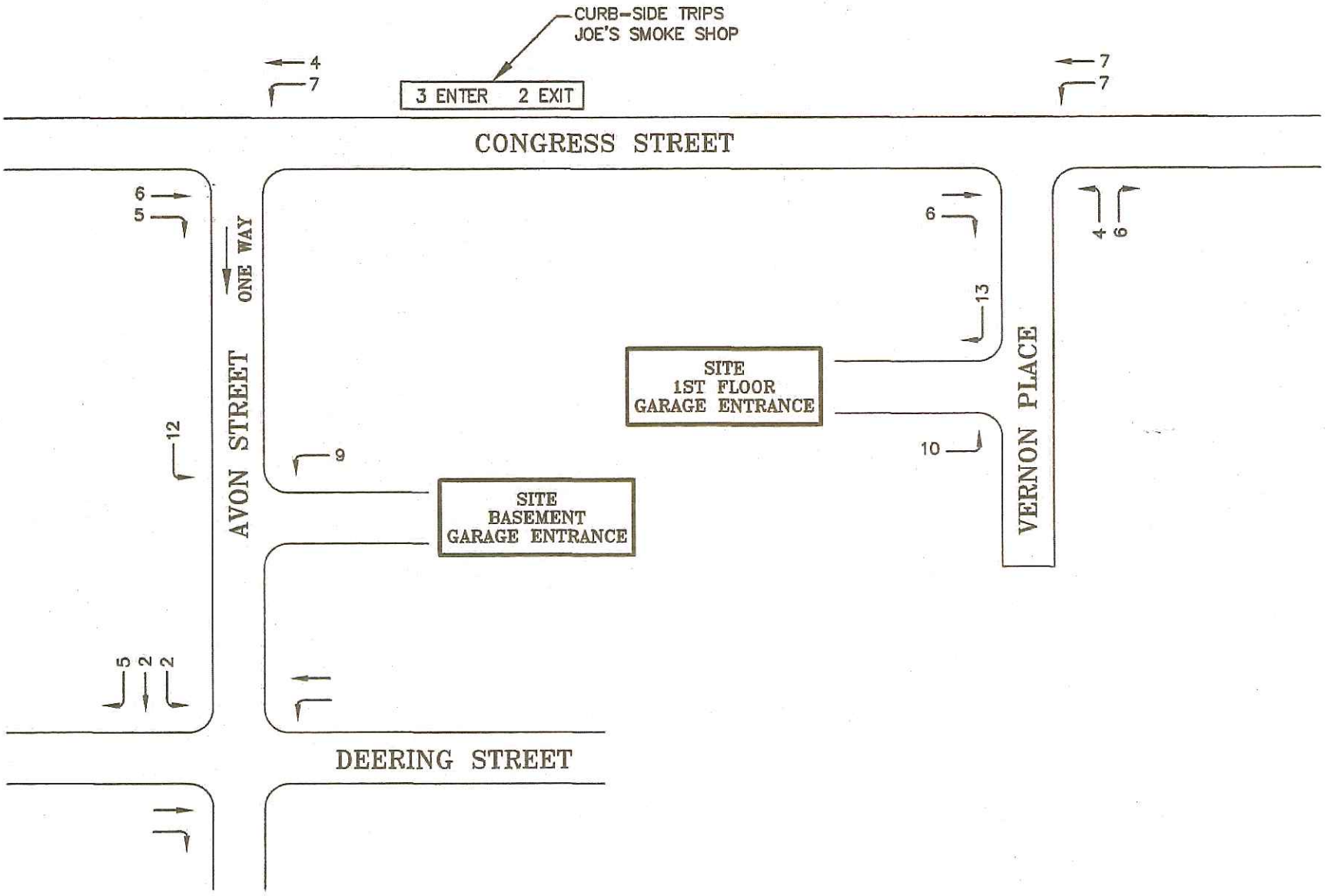
667 CONGRESS STREET APARTMENT BLDG PORTLAND, MAINE	TRAFFIC SOLUTIONS 235 BANCROFT STREET, PORTLAND, MAINE 04102-1730
DATE: AUGUST 12, 2015	FIGURE: 2



SITE TRAFFIC ASSIGNMENT
AM PEAK HOUR
FIGURE 3

E:\LAND PROJECTS\34000\344398 TRAFFIC SOLUTIONS\667 CONGRESS ST\PLANSET\667CONGRESS ST.DWG

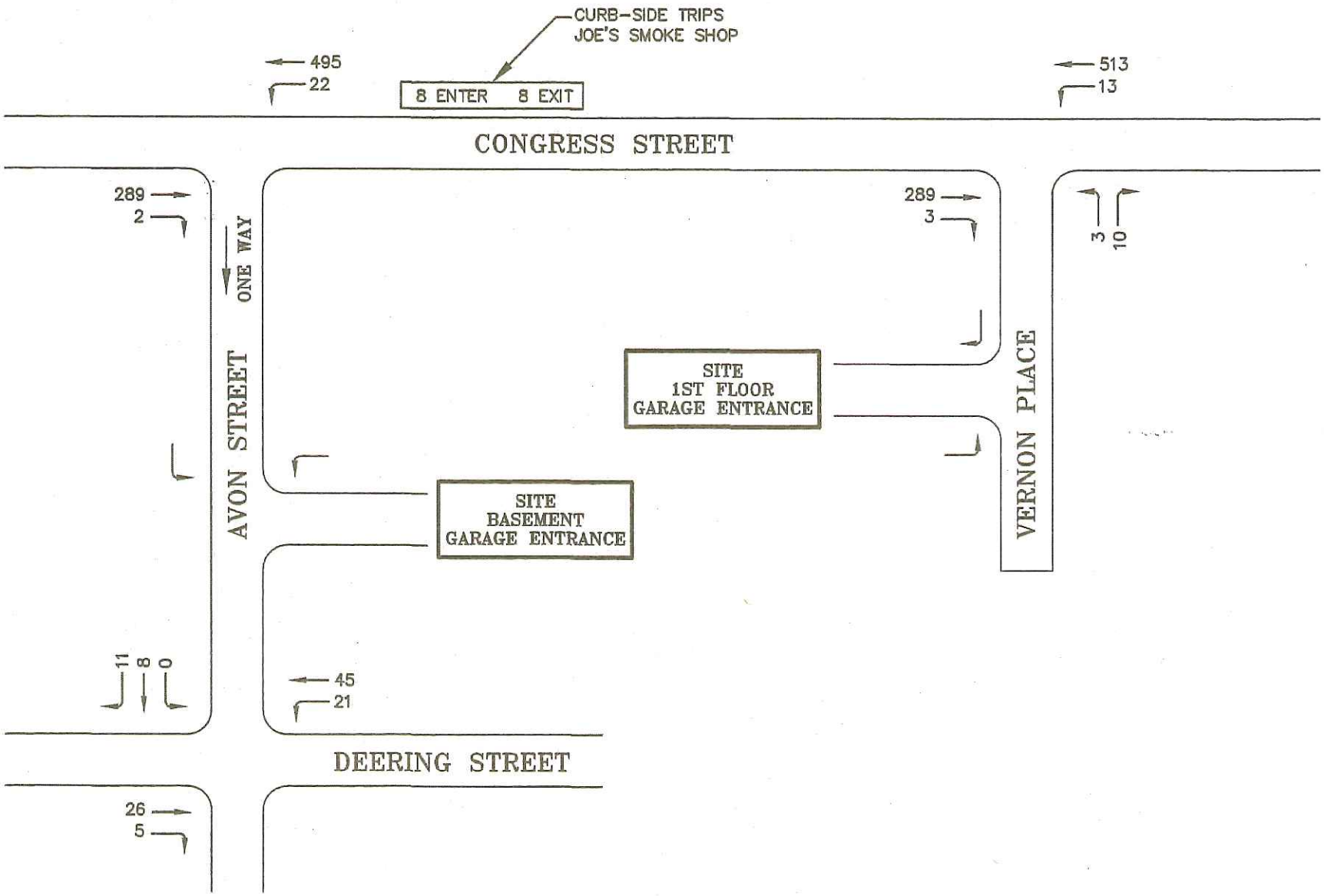
667 CONGRESS STREET APARTMENT BLDG PORTLAND, MAINE	TRAFFIC SOLUTIONS 235 BANCROFT STREET, PORTLAND, MAINE 04102-1730
DATE: AUGUST 12, 2015	FIGURE: 3



SITE TRAFFIC ASSIGNMENT
PM PEAK HOUR
FIGURE 4

E:\LAND PROJECTS\34000\344389 TRAFFIC SOLUTIONS\667 CONGRESS ST\PLANSET\667CONGRESS ST.DWG

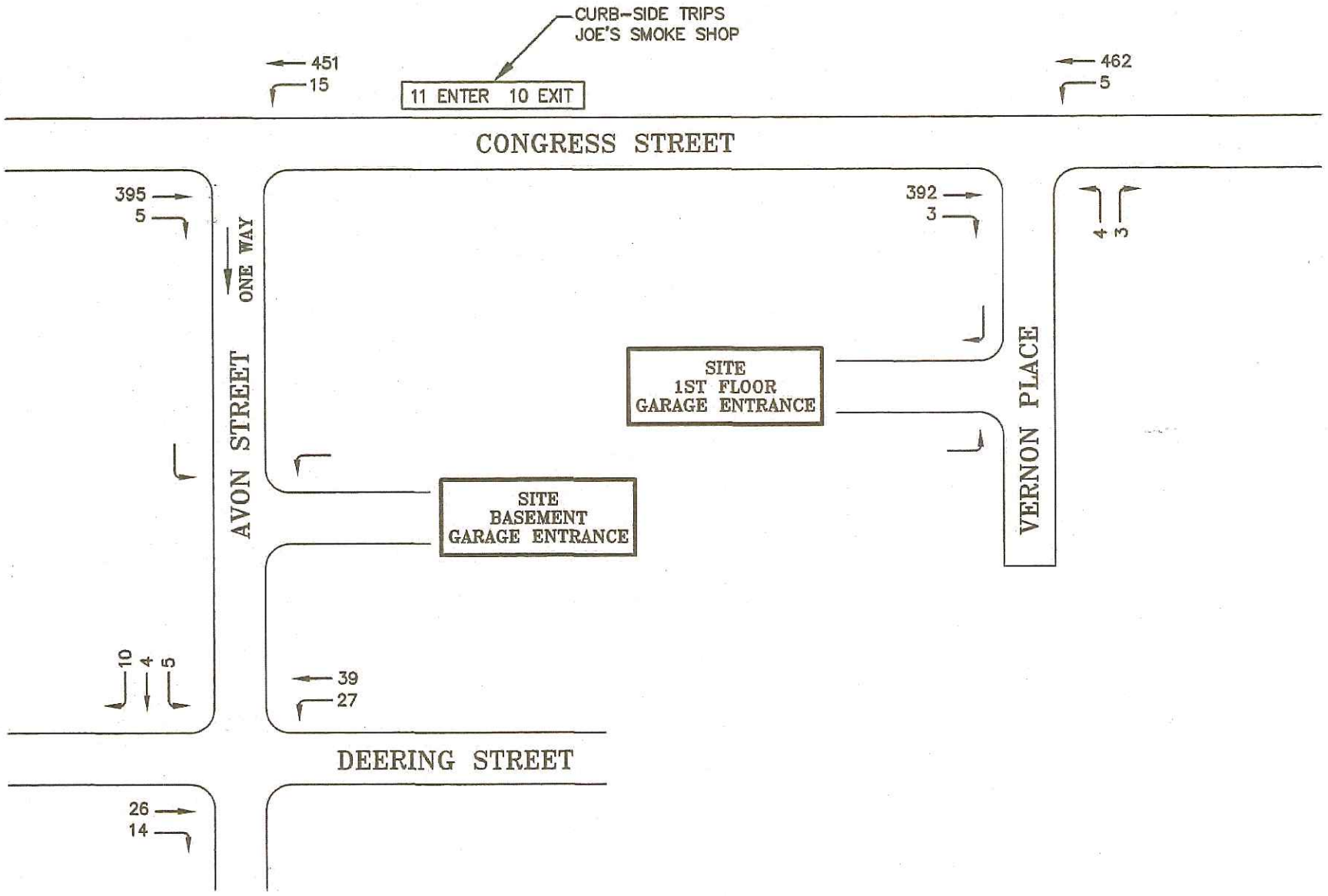
667 CONGRESS STREET APARTMENT BLDG PORTLAND, MAINE	TRAFFIC SOLUTIONS 235 BANCROFT STREET, PORTLAND, MAINE 04102-1730
DATE: AUGUST 12, 2015	FIGURE: 4



2017 PRE-DEVELOPMENT TRAFFIC
AM PEAK HOUR
FIGURE 5

E:\LAND PROJECTS\34000\344309 TRAFFIC SOLUTIONS\667 CONGRESS ST\PLANSET\667CONGRESS ST.DWG

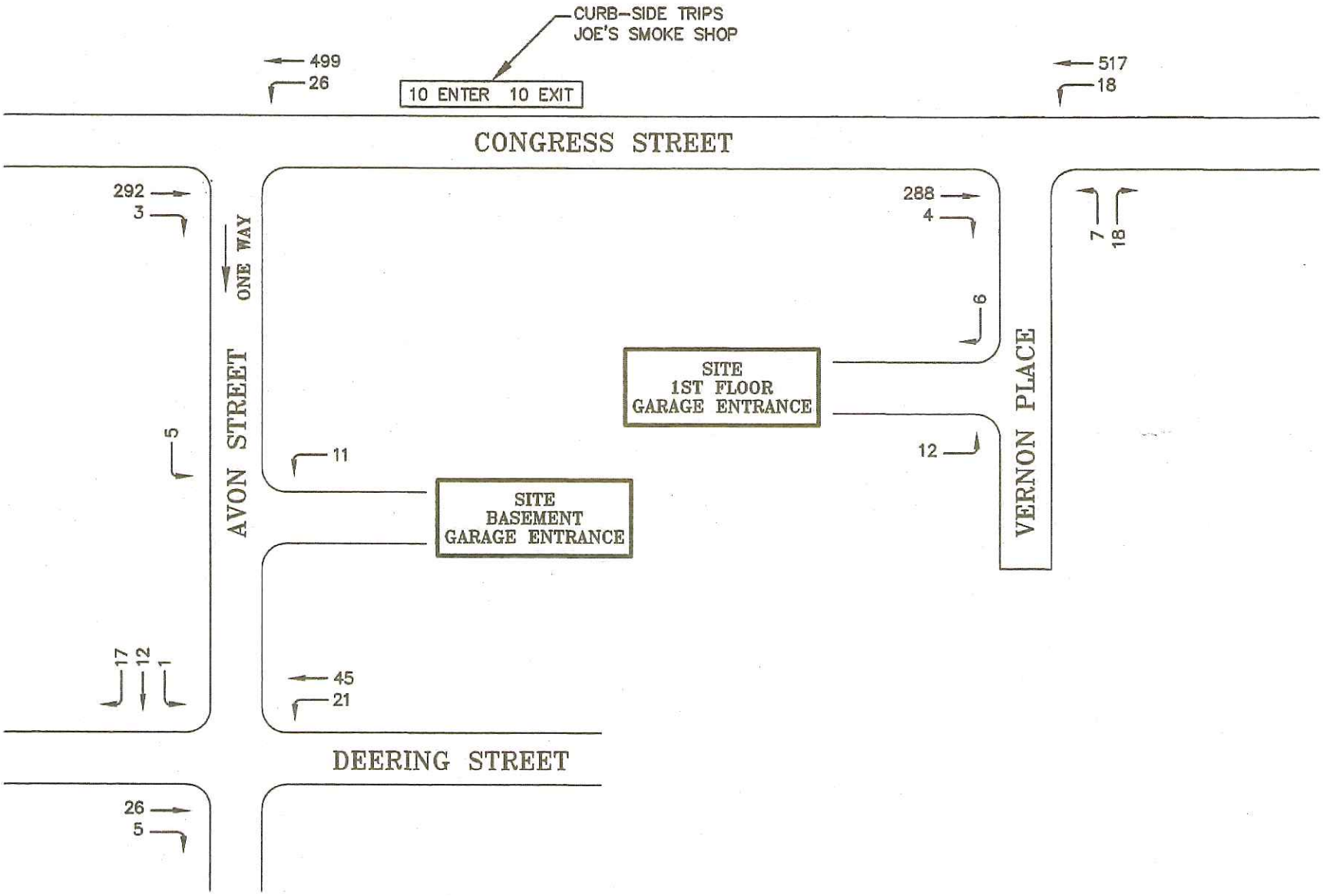
667 CONGRESS STREET APARTMENT BLDG PORTLAND, MAINE	TRAFFIC SOLUTIONS 235 BANCROFT STREET, PORTLAND, MAINE 04102-1730
DATE: AUGUST 12, 2015	FIGURE: 5



2017 PRE-DEVELOPMENT TRAFFIC
PM PEAK HOUR
FIGURE 6

E:\LAND PROJECTS\34000\344399 TRAFFIC SOLUTIONS\667 CONGRESS ST\PLANSET\667CONGRESS ST.DWG

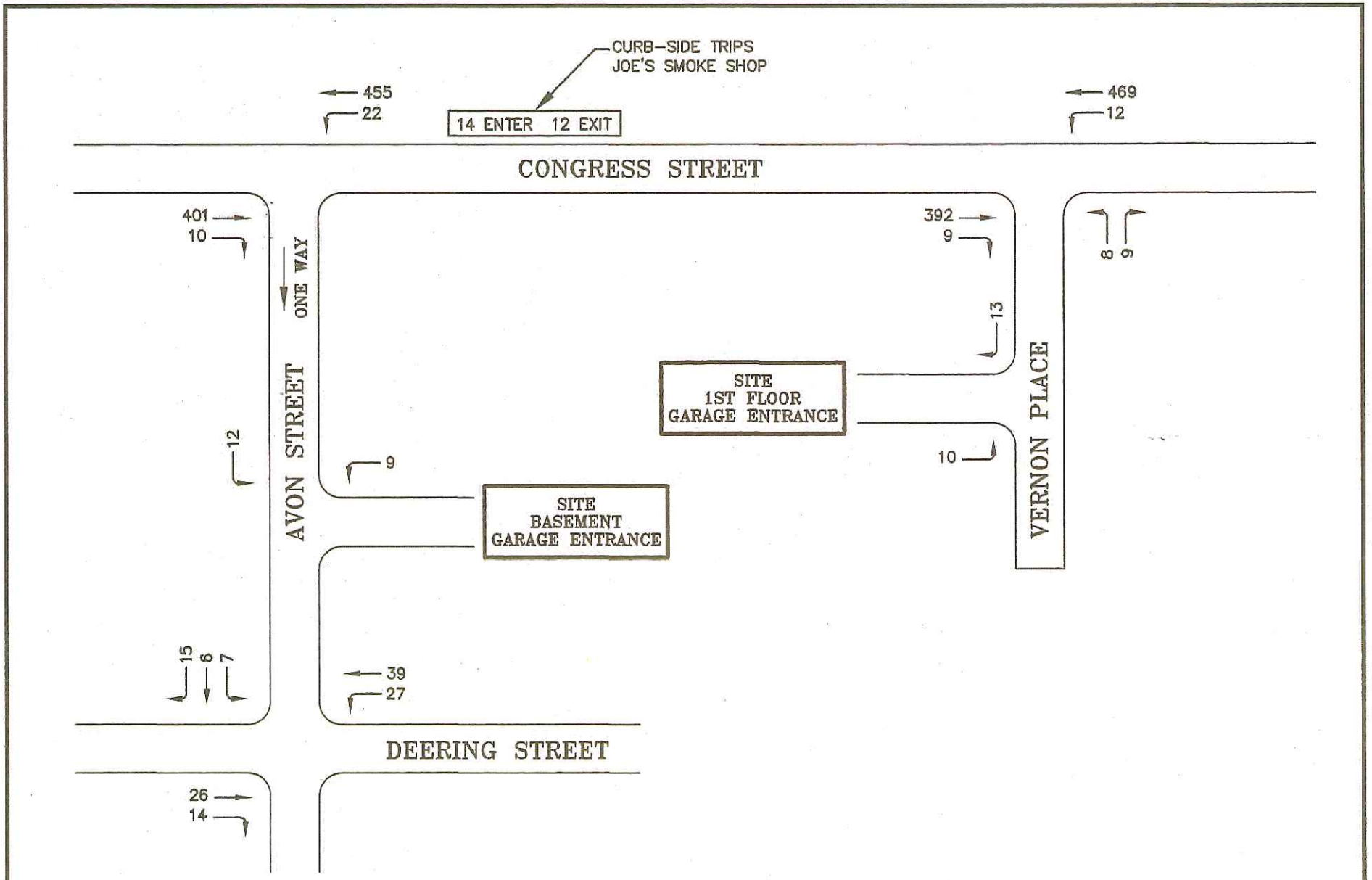
667 CONGRESS STREET APARTMENT BLDG PORTLAND, MAINE	TRAFFIC SOLUTIONS 235 BANCROFT STREET, PORTLAND, MAINE 04102-1730
DATE: AUGUST 12, 2015	FIGURE: 6



2017 POST–DEVELOPMENT TRAFFIC
AM PEAK HOUR
FIGURE 7

E:\LAND PROJECTS\34000\34399 TRAFFIC SOLUTIONS\667 CONGRESS ST\PLANSET\667CONGRESS ST.DWG

667 CONGRESS STREET APARTMENT BLDG PORTLAND, MAINE	TRAFFIC SOLUTIONS 235 BANCROFT STREET, PORTLAND, MAINE 04102–1730
DATE: AUGUST 12, 2015	FIGURE: 7



2017 POST-DEVELOPMENT TRAFFIC
PM PEAK HOUR
FIGURE 8

E:\LAND PROJECTS\34000\34439 TRAFFIC SOLUTIONS\667 CONGRESS ST\PLANSET\667CONGRESS ST.DWG

667 CONGRESS STREET APARTMENT BLDG
PORTLAND, MAINE

DATE: AUGUST 12, 2015

FIGURE: 8

TRAFFIC SOLUTIONS
235 BANCROFT STREET, PORTLAND, MAINE 04102-1730

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:25	7:25	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	905	930	907	884	898	904
Vehs Exited	902	929	911	883	895	904
Starting Vehs	3	2	5	6	5	3
Ending Vehs	6	3	1	7	8	4
Travel Distance (mi)	135	140	136	132	135	136
Travel Time (hr)	4.9	5.1	5.0	4.8	5.0	5.0
Total Delay (hr)	0.3	0.3	0.3	0.3	0.3	0.3
Total Stops	36	39	48	32	47	39
Fuel Used (gal)	4.3	4.5	4.3	4.2	4.4	4.4

Interval #0 Information Seeding

Start Time	7:25
End Time	7:30
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	905	930	907	884	898	904
Vehs Exited	902	929	911	883	895	904
Starting Vehs	3	2	5	6	5	3
Ending Vehs	6	3	1	7	8	4
Travel Distance (mi)	135	140	136	132	135	136
Travel Time (hr)	4.9	5.1	5.0	4.8	5.0	5.0
Total Delay (hr)	0.3	0.3	0.3	0.3	0.3	0.3
Total Stops	36	39	48	32	47	39
Fuel Used (gal)	4.3	4.5	4.3	4.2	4.4	4.4

3: Congress & Avon Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.0	0.3	0.1
Total Del/Veh (s)	0.3	0.2	0.3

4: Avon & Deering Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1
Total Del/Veh (s)	0.7	0.1	3.2	1.0

7: Congress & Vernon Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.1	0.3
Total Del/Veh (s)	0.5	0.1	5.3	0.4

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	0.9

Intersection: 3: Congress & Avon

Movement	EB
Directions Served	LT
Maximum Queue (ft)	70
Average Queue (ft)	7
95th Queue (ft)	36
Link Distance (ft)	80
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Avon & Deering

Movement	EB	NB
Directions Served	LT	LTR
Maximum Queue (ft)	13	32
Average Queue (ft)	1	14
95th Queue (ft)	5	39
Link Distance (ft)	294	424
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Congress & Vernon

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	57	36
Average Queue (ft)	3	9
95th Queue (ft)	24	32
Link Distance (ft)	387	126
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:25	7:25	7:25	7:25	7:25	7:25
End Time	8:30	8:30	8:30	8:30	8:30	8:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	973	955	918	928	885	931
Vehs Exited	970	953	921	925	887	929
Starting Vehs	3	4	8	3	7	3
Ending Vehs	6	6	5	6	5	4
Travel Distance (mi)	146	143	138	138	131	139
Travel Time (hr)	5.5	5.4	5.1	5.2	5.0	5.2
Total Delay (hr)	0.4	0.4	0.4	0.4	0.4	0.4
Total Stops	80	69	63	68	73	70
Fuel Used (gal)	5.0	4.7	4.6	4.6	4.4	4.6

Interval #0 Information Seeding

Start Time	7:25
End Time	7:30
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:30
End Time	8:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	973	955	918	928	885	931
Vehs Exited	970	953	921	925	887	929
Starting Vehs	3	4	8	3	7	3
Ending Vehs	6	6	5	6	5	4
Travel Distance (mi)	146	143	138	138	131	139
Travel Time (hr)	5.5	5.4	5.1	5.2	5.0	5.2
Total Delay (hr)	0.4	0.4	0.4	0.4	0.4	0.4
Total Stops	80	69	63	68	73	70
Fuel Used (gal)	5.0	4.7	4.6	4.6	4.4	4.6

3: Congress & Avon Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.0	0.2	0.1
Total Del/Veh (s)	0.4	0.2	0.3

4: Avon & Deering Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1
Total Del/Veh (s)	0.7	0.0	3.8	1.3

7: Congress & Vernon Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.1	0.3
Total Del/Veh (s)	0.6	0.1	5.1	0.6

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	1.2

Intersection: 3: Congress & Avon

Movement	EB
Directions Served	LT
Maximum Queue (ft)	52
Average Queue (ft)	7
95th Queue (ft)	33
Link Distance (ft)	80
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Avon & Deering

Movement	EB	NB
Directions Served	LT	LTR
Maximum Queue (ft)	10	31
Average Queue (ft)	1	19
95th Queue (ft)	6	43
Link Distance (ft)	294	424
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Congress & Vernon

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	54	53
Average Queue (ft)	5	19
95th Queue (ft)	27	46
Link Distance (ft)	387	126
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	905	930	907	884	898	904
Vehs Exited	902	929	911	883	895	904
Starting Vehs	3	2	5	6	5	3
Ending Vehs	6	3	1	7	8	4
Travel Distance (mi)	135	140	136	132	135	136
Travel Time (hr)	4.9	5.1	5.0	4.8	5.0	5.0
Total Delay (hr)	0.3	0.3	0.3	0.3	0.3	0.3
Total Stops	36	39	48	32	47	39
Fuel Used (gal)	4.3	4.5	4.3	4.2	4.4	4.4

Interval #0 Information Seeding

Start Time	4:25
End Time	4:30
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	905	930	907	884	898	904
Vehs Exited	902	929	911	883	895	904
Starting Vehs	3	2	5	6	5	3
Ending Vehs	6	3	1	7	8	4
Travel Distance (mi)	135	140	136	132	135	136
Travel Time (hr)	4.9	5.1	5.0	4.8	5.0	5.0
Total Delay (hr)	0.3	0.3	0.3	0.3	0.3	0.3
Total Stops	36	39	48	32	47	39
Fuel Used (gal)	4.3	4.5	4.3	4.2	4.4	4.4

3: Congress & Avon Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.0	0.3	0.1
Total Del/Veh (s)	0.3	0.2	0.3

4: Avon & Deering Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1
Total Del/Veh (s)	0.7	0.1	3.2	1.0

7: Congress & Vernon Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.1	0.3
Total Del/Veh (s)	0.5	0.1	5.3	0.4

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	0.9

Intersection: 3: Congress & Avon

Movement	EB
Directions Served	LT
Maximum Queue (ft)	70
Average Queue (ft)	7
95th Queue (ft)	36
Link Distance (ft)	80
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Avon & Deering

Movement	EB	NB
Directions Served	LT	LTR
Maximum Queue (ft)	13	32
Average Queue (ft)	1	14
95th Queue (ft)	5	39
Link Distance (ft)	294	424
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Congress & Vernon

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	57	36
Average Queue (ft)	3	9
95th Queue (ft)	24	32
Link Distance (ft)	387	126
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:25	4:25	4:25	4:25	4:25	4:25
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1013	1058	1049	1001	1005	1025
Vehs Exited	1011	1062	1044	1005	1000	1024
Starting Vehs	3	6	2	7	5	4
Ending Vehs	5	2	7	3	10	5
Travel Distance (mi)	151	158	158	151	150	154
Travel Time (hr)	5.7	6.0	6.0	5.7	5.6	5.8
Total Delay (hr)	0.4	0.5	0.5	0.4	0.4	0.4
Total Stops	64	67	83	62	52	64
Fuel Used (gal)	5.0	5.3	5.3	5.0	4.9	5.1

Interval #0 Information Seeding

Start Time	4:25
End Time	4:30
Total Time (min)	5

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1013	1058	1049	1001	1005	1025
Vehs Exited	1011	1062	1044	1005	1000	1024
Starting Vehs	3	6	2	7	5	4
Ending Vehs	5	2	7	3	10	5
Travel Distance (mi)	151	158	158	151	150	154
Travel Time (hr)	5.7	6.0	6.0	5.7	5.6	5.8
Total Delay (hr)	0.4	0.5	0.5	0.4	0.4	0.4
Total Stops	64	67	83	62	52	64
Fuel Used (gal)	5.0	5.3	5.3	5.0	4.9	5.1

3: Congress & Avon Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.0	0.4	0.2
Total Del/Veh (s)	0.4	0.3	0.4

4: Avon & Deering Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.1
Total Del/Veh (s)	0.8	0.1	3.4	1.3

7: Congress & Vernon Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.1	0.2
Total Del/Veh (s)	0.6	0.1	6.5	0.5

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	1.2

Intersection: 3: Congress & Avon

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	72	8
Average Queue (ft)	10	0
95th Queue (ft)	43	6
Link Distance (ft)	80	235
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Avon & Deering

Movement	EB	NB
Directions Served	LT	LTR
Maximum Queue (ft)	13	36
Average Queue (ft)	1	20
95th Queue (ft)	6	45
Link Distance (ft)	294	424
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Congress & Vernon

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	60	36
Average Queue (ft)	6	13
95th Queue (ft)	35	38
Link Distance (ft)	387	126
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1

on the safety of this intersection due to its low trip generation and the majority of the traffic will park off site.

Parking Assessment

The City ordinance suggests one parking space per housing unit which would result in the Applicant needing to provide a total of 18 spaces. Providing more parking than needed results in loss of open space and increases stormwater impacts, and underutilization of valuable urban land. At the same time, providing too little parking would have adverse impacts on residents and the surrounding neighborhood. The applicant's goal through the parking demand analysis process is to find the appropriate ratio of parking spaces. Our office has data suggesting actual parking demand will be well below one space per unit for affordable housing. To estimate the parking demand for the proposed project, Gorrill-Palmer Consulting Engineers, Inc. reviewed our files for relevant parking studies we have completed and determined that two were relevant to this project and are summarized below:

- Island View Apartments in Portland- This inventory was performed on July 12, 2004 from 6:00 to 9:00 PM. Island View Apartments is a 70-unit apartment building on the corner of Walnut and North Streets in Portland. It contains a total of 84 parking spaces, 29 of which are designated visitor parking only, and 2 of which are handicap. In the peak half-hour period, a maximum of 49 parking spaces were occupied. This translates to a demand of 0.70 parking spaces per dwelling unit.

- As part of studies for similar projects in the past, our office examined the parking occupancy of apartment buildings in downtown Portland with dedicated parking lots, either behind or within the building as part of another application. Our office completed parking occupancy counts from 10-11 PM (within the peak period, based on ITE and ULI data) at 53 Danforth Street, 645 Congress Street, and Walker Terrace (at the corner of Congress and Walker Street) on Tuesday, October 26, 2010. See summary below.

- In addition, we referenced the parking supply for Franklin Towers and Oak Street Lofts. Franklin Towers has 200 units, and based upon aerial data, a parking supply of 56 spaces. Oak Street Lofts has 37 units, and 16 parking spaces, although it should be noted that half of these spaces (eight) are for motorcycles. For the purposes of this letter, it is assumed that peak demand at both of these facilities is at 100 percent occupancy.

Based on the occupancy counts, the following parking demand was determined:

53 Danforth:	43 units, 29 spaces occupied	=	0.67 spaces/unit
645 Congress:	56 units, 28 spaces occupied	=	0.50 spaces/unit
Walker Terrace:	40 units, 20 spaces occupied	=	0.50 spaces/unit
Oak Street Lofts:	37 units, 16 spaces occupied*	=	0.43 spaces/unit
Franklin Towers:	200 units, 58 spaces occupied**	=	0.29 spaces/unit
		AVERAGE:	0.48spaces/unit

*Assumes 100% occupancy at Oak Street.

** Assumes 58 spaces based upon aerial imagery, and 100% occupancy at Franklin Towers.

This information indicates an average need for 0.48 spaces per apartment within the Portland Peninsula.

Based on the level of demand at the above referenced studies, it is the opinion of Gorrill Palmer that appropriate parking demand for the proposed 134 Washington Avenue Efficiencies is 0.70 spaces per unit, translating to a demand for 13 spaces. Of these 13 spaces, 2 would be provided on site and 11 off site through the City's in lieu fee process.

Our office completed an on street parking assessment within a 360 foot radius of the project on Monday March 24, 2014 at 11:30 PM. This radius is within a 2 minute walk to the site. This information showed there are 73 spaces available and 24 were occupied at that time, presumably by residents.

Closing

Please contact this office with any questions.

Sincerely,

Gorrill-Palmer Consulting Engineers, Inc.

Thomas L Gorrill, PE, PTOE
Principal

tlgU:\2884\Metcalf 04-1-14.doc

Att. 12

Traffic Solutions
William J. Bray, P.E.
235 Bancroft Street
Portland, ME 04102
(207) 774-3603
(207) 400-6390 mobile
trafficsolutions@maine.rr.com

MEMORAMDUM

TO: Will Savage, Acorn Engineering, Inc.

FROM: Bill Bray, P.E., Traffic Consultant

DATE: July 30, 2015

SUBJECT: 667 Congress Street – Traffic and Parking Assessment Requirements

Based upon my understanding, the proposed 667 Congress Street project is a 139-unit infill development located near Longfellow Square in Portland. The current site proposal calls for an eight-story building with first floor commercial retail space (Joe's Smoke Shop) and the remaining floors reserved for the proposed residential apartment units. There are two-levels of underground parking contemplated with approximately 81 spaces dedicated to building tenants. The first floor of the proposed parking will outlet onto Vernon Place and the second floor will outlet onto Avon Street. The proposed project will rebuild the existing sidewalk along the Congress Street frontage of the project and will construct a wider sidewalk along the full length of Avon Street.

An informal meeting was held with Thomas Errico, P.E., the City's Traffic Peer Review Consultant, to determine the scope of effort required to permit the proposed project. Mr. Errico advised the need for a detailed traffic impact study that measures the post-development traffic impact of the proposed project on the following roadway intersections:

1. Congress Street @ Avon Street
2. Avon Street @ Deering Street
3. Congress Street @ Vernon Place

Manual traffic counts have been collected at the noted intersections during both the morning and afternoon "peak" commuter hours and the data summarized to reflect existing "peak" travel conditions. Trip generation estimates and the assignment of those trips to the roadway network will be prepared for the proposed project based upon national data; current roadway safety trends will be reviewed and evaluated for the study area intersections; intersection operations and level of service measurements will be determined for each study intersection for both a pre and post-development travel condition. This effort will be summarized in the preparation of a detailed traffic impact study for the proposed project. A separate parking demand assessment will be conducted at multiple existing residential properties in the City of Portland to determine an appropriate parking space requirement per residential unit for the proposed project. Finally, in accordance with the City Ordinance, a detailed Transportation Demand Management plan will be prepared for the proposed project that details what efforts will be employed by the apartment complex in reducing vehicle miles traveled and parking demand of the proposed project.

Att. 13

667 Congress Street
Neighborhood Meeting Certification

I, Jonathan Culley, of Redfern Properties LLC hereby certify that a neighborhood meeting was held on August 26, 2015 at our office at Reiche School Community Room, 166 Brackett Street, Portland at 6:00pm.

I also certify that on August 11, 2015, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.

2. Residents on the "interested parties" list.

3. A digital copy of the notice was also provided to the Planning Division at jmy@portlandmaine.gov and Shukria Wiar shukriaw@portlandmaine.gov the assigned planner, to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,

_____ 8/27/2015

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

redfern properties

P.O. Box 8816
Portland, ME 04104
Office: 207-221-5746
Fax: 207-221-2822
www.redfernproperties.com

August 11, 2015

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a new development at 667 Congress St. in Portland, the site of Joe's Super Variety. The project consists of ground floor commercial space, which will be the new home of Joe's Super Variety and 139 residential rental apartments on Floors 2-8. This meeting pertains to our Level III Site Plan Application.

Meeting Location:	Reiche School Community Room, 166 Brackett St., Portland
Meeting Date:	Wednesday, August 26th
Meeting Time:	6:00pm

The City Code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions, please contact me at 207-776-9715 or jonathan@redfernproperties.com. I hope to see you at the meeting.

Sincerely,

Jonathan Culley
Redfern Properties LLC

SIGN-IN SHEET

667 Congress Street Apartment Project

Neighborhood Meeting related to Level III Site Plan Application

August 26, 2015, 6pm **Reiche School Community Room**

Name	Address	Email (Optional)
Pat O'Donnell	442 Cumberland	Patodonnell6@ Gmail Com
PHYLLIS ROGERS	160 PINE ST.	
Michelle Souliere	The Green Hand Bookshop 661 Congress St.	michelle.souliere@gmail.com
Loren Coleman	Int'l Cryptozoology Museum 11 Avon Street	lcoleman@maine.rr.com
Ed Resnisky	115 CLARK ST, Ptld, ME	Edward Resnisky@yahoo.com
Kenn Guimond	660 Congress ST	Guimondgroup@AOL.com
Michael Killey		MKilley@WABOSTON.COM
Judith West	18 Pine Street	west31@mmc.org
Steven Schwartz	15 Salem St	SCS Media@aol.com
FRANK ROBBINS	11 DEERING ST	FROBBINS@CascoBay E.K.C

667 Congress Street

Neighborhood Meeting – Level III Site Plan Application

Meeting held August 26, 2015, 6pm at Reiche School Community Room (166 Brackett St.), Portland

Meeting Minutes:

Please note that minutes are not verbatim, but we have made our best efforts to reflect meaning and intent.

The meeting began at 6:03pm. Jonathan Culley, principal of Redfern Properties introduced himself and the design team consisting of Ryan Senatore of Ryan Senatore Architecture, Civil Engineer Will Savage of Acorn Engineering.

Culley explained the City of Portland's approval process, that this evening's meeting is related to the Level III Site Plan Application, which focuses on the more technical aspects of the project such as traffic, parking, stormwater, architectural design, landscaping, etc. He noted separate Historic Preservation Board approval process and the upcoming meeting with the Historic Board on September 2nd. Culley noted that a Planning Board workshop has been scheduled for September 29th, 2015.

Culley described the project in general and then turned the floor over to Ryan Senatore. Ryan showed a series of building plans, elevations, and renderings and discussed architectural themes and elements.

Will Savage of Acorn Engineering discussed site improvements including grading, storm water plans, utilities plans, and parking lot configuration.

Culley then turned the discussion to parking, acknowledging that there were some parking concerns amongst neighbors. Culley talked about the most progressive urban planning models and how smart-growth planning focuses on less parking in urban neighbors, emphasizing walkability and transit. He discussed what the City of Minneapolis is doing to reduce parking and thus reduce the cost of housing. He referenced a University of Connecticut study that concluded that the most vibrant urban areas are characterized by less parking and not more.

Culley then described three approaches that the project would take to minimize parking demand amongst tenants:

1. Public and private car share - tenants in building have 1 shared electric car. The private car share would be the first of its kind in Portland.
2. Unbundling rent from parking fees -separate costs for parking; encourages individual cost-benefit analysis
3. Subsidize monthly metro cards for tenants who opt out of parking

The floor was then opened for questions.

Q: Is there a plan for restaurant parking? Have there been any conversations with the local owners who currently lease the lot yet?

A: Traffic analysis team is looking into existing long term leases for the current owners; there are also continued conversations with these owners and research on leasing opportunities

Q: (Continued emphasis that redevelopment will put strain on on-street parking demand especially for restaurant patrons)

Q: Landlord -owns multiple properties in the surrounding area and primary concern is parking and explained that it is hard to rent apartments without offering parking.

Q: Are there any plans to go deeper or higher with parking garage? (adding another floor of parking)

A: No this is cost prohibitive and not feasible given the size of the lot.

Will Savage referenced a Gorrill Palmer study which determined that one-bedroom apartments on average consumed 0.48 parking spaces.

Q: Comment by Property Manager with the opposite experience. Never had a problem renting units without parking spaces and often had tenants without cars.

Q: Will there be an active entrance off of Avon?
A: Yes, there is both the basement parking level entrance and a side tenant entrance with a façade, attempting to engage Avon Street.

Q: Is there a possibility of installing a heated sidewalk along Avon?
A: It is not currently in the plans but there could be continued research (all heat in the building is provided by air sourceheat pumps)

Q: Will the transportation committee have to approve project?
A: The Department of Public Services (DPS) reviews our plans as part of the Site Plan Review. The City also hires a traffic engineer to review our plans. So transportation issues are part of the Site Plan Review process by the Planning Board.

Q: What will be used as a vendor drop-off location for Joe's?
A: It is planned that there will be continued use of Congress Street for vendors; the street is wider than either Vernon and Avon and will better accommodate the drop-offs. However, there are dropdowns along Vernon for vendors if need be.

Q: Will the tenants be paying for heat?
A: Yes (electricity). Heat is provided by electric mini-split heat pumps.

Q: What is the definition of market rent and what will be the cost of these units?
ANS: Market rent is defined by the supply and demand of the area, but we foresee studios at around $1100/month and 1bedrooms at $1400/month.

Q: Will you be addressing sidewalks on Avon St.? Will there be continued access to businesses on Avon Street during construction?
A: We are considering options for Avon St. Currently Avon St. is less than 15' wide and this is not optimal. We will be considering the idea of a Woonerf or Complete Street with integrated sidewalks. We will certainly work with business owners and the City to maintain access to businesses.

Q: What is the security planned for the building?
A: Has not been finalized yet but tentatively there will be key fobs at each of the pedestrian entrances as well as key entrances for the garages. There will also be new lighting along both Avon and Vernon, as well as security cameras both inside and outside the building.

Q: **1. What is the predicted construction schedule?**
2. What is the noise impact ordinance requirements for the area?
A: We are aiming to have PC construction break ground by December 2015 and complete the project within a 15 month construction program (completion in spring 2017). We will also be complying with city ordinances including quiet hours between 5pm -7am for B-3 zones (Will)

Q: Is Joe's planning on changing their store at all?
A: Yes, we believe that Joe's will be altering their product offerings slightly to appeal to the changing neighborhood.

The meeting was adjourned at 6:46pm.

Att. 14

FIRE RISK MANAGEMENT, INC
1 Front St., Bath, ME 04530
207/442-7200 [221-1295 (fax)]
www.fireriskmgt.com

Date: 11 September, 2015

Memo Report

From: W. Mark Cummings, P.E.

To: Mr. Will Savage; Acorn Engineering
Mr. Ryan Senator; Ryan Senator Architecture

Subject: **Response to City of Portland Plan Review Comments; ICW 667 Congress St.**

As requested, Fire Risk Management, Inc. (FRM) has reviewed the set of comments received from the City of Portland regarding the plans for the building to be constructed at 667 Congress St. The focus for this specific response are two of the comments provided by Chief Keith Gautreau of the Fire Prevention Bureau; specifically dealing with the fire water flow requirements and some concern over the width of Avon St.; which runs adjacent to the east side of the building

Background

The proposed design for the new construction at 667 Congress St. consists of a high rise (8-story) building that will primarily consist of apartments (Residential, R2 occupancy); albeit some office and retail spaces are to be located on the lower floor levels, along with an open parking garage. The building will be constructed to meet the requirements for classification as Type IB (per IBC) construction; or Type II (222), per NFPA.

In his comments, Chief Gautreau requests verification that the City's water supply system, along with the installed hydrant locations will be sufficient to support the fire water flow requirements of this new building. Additionally, he points out the fact that Avon St., which runs parallel to the east side of the building is only about 14 ft. in width; smaller than minimum width allowed by NFPA 1, the *Fire Code*®, for a fire access lane or that which is allowed by the City's Technical Manual [20 ft. minimum for NFPA and 16 ft. minimum per the City's Technical Manual].

Discussion

Chapter 18 of NFPA 1 is used to determine the required fire flow that will be needed to support manual firefighting efforts within a building; based on the building's size and construction type. The base requirement for this building's size (area of all floors) and construction type, a fire flow of 2500 gpm for a minimum duration of 2 hours would be required. Due to its construction type, only the area of the three (3) largest contiguous floors are used to determine the total fire flow requirement. However, since the building is to be protected throughout, this requirement can be further reduced to only 1000 gpm for 2 hours. If quick response (QR) sprinklers are to be specified, the minimum flow requirement can then be further reduced to 650 gpm. Although an existing fire hydrant is located immediately adjacent to the building, at the corner of Avon and Congress Streets, due to its close proximity, within the minimum of 40 ft. that is typically allowed by NFPA 1, it was not specifically considered for use in supporting manual firefighting operations involving this building. However, a number of other hydrants are located nearby, which appear to be within 250 ft. of the proposed building location. These include hydrants at the corners of Congress and Park Streets, Congress and State Streets, and Deering and Avon Streets. This, coupled with the hydraulic data regarding the City's water supply system for this area, it is felt that the existing water supply system, including hydrant locations, should be more than adequate to provide sufficient water to meet the required fire flow demands of this building.

Chief Gautreau is correct in his concern regarding the width of Avon St. and its potential use as a fire access lane. However, based on a review of the site plan, coupled with the requirements contained in NFPA 1 for Fire Department access, Avon St. would not be required for use as a fire access lane for this building to be in compliance with all NFPA 1 requirements. The primary access requirements outlined within NFPA 1 that impact the locations and proximity of fire access lanes to a building include the maximum distance to an exterior door and the maximum distance from any portion of the building's exterior wall. A fire access lane must be within 50 ft. of an exterior door and, due to the fact that the building is fully protected by an automatic fire sprinkler system, can be no more than 450 ft. from any portion of the building's exterior walls. Both these metrics can be accommodated by access along Congress St. alone. Equally, the corner of Deering and Avon Streets is within 450 ft. of much of the building as well; at least its north, east, and south sides. As such, it is not necessary to designate Avon St. as a fire access lane for this building to be in compliance with the NFPA 1 requirements for Fire Department access.

Summary and Recommendations

Based on my review, the City's water supply system, including existing hydrant locations, should be more than adequate to support the fire flow requirements for the new building. Equally, the Fire Department access requirements of NFPA 1 can readily be accommodated for this building through the use of only Congress St. as the fire access lane; albeit use of Deering St. to support access to some portions of the building would also be within these requirements. However, depending on the other requirements for the building, if it is possible to increase the width of Avon St. to at least 16 ft., it is certainly something that should be strongly considered. Anytime Fire Department access to a structure can be improved, this does nothing more than improve the overall fire safety of the building and that of the life safety for the building's occupants. Increasing the width of this street would not be "required" to comply with code requirements, but is encouraged for consideration.

If you have any questions regarding what has been outlined above, please don't hesitate to contact me.

W. Mark Cummings, P.E.
Principal Fire Protection Engineer

Att. 15

Traffic Solutions
William J. Bray, P.E.
235 Bancroft Street
Portland, ME 04102
(207) 774-3603
(207) 400-6890 mobile
trafficsolutions@maine.rr.com

September 14, 2015

Parking Assessment
Proposed
667 Congress Street Apartments
Portland, Maine

INTRODUCTION

Redfern Properties, LLC is proposing construction of an eight-story apartment building at 667 Congress Street on a parcel of property bordered by Congress Street, Avon Street, and Vernon Place. The subject property is located on the peninsular within the Downtown Business Zone (B-3). Joe's Smoke Shop, a 3,673 square foot neighborhood variety store, presently occupies the Congress Street/Avon Street corner of the proposed site and the remainder of the site is a paved parking lot with a total of 63 spaces.

The proposed project will provide a total of 139 apartment units that will include 34 efficiency units, 97 one-bedroom units, and 8 two-bedroom units. The proposed building design provides a total of 81 parking spaces with 37 of the spaces located in the basement level of the building and the remaining 44 spaces on the first floor of the building. Three of the 81 total spaces are reserved for Joe's Smoke Shop resulting in a total of 78 spaces reserved for tenants of the building. In addition, secured covered space is reserved for bicycle parking (total space for 56 bicycles), a U-Share vehicle parking space, and two to four motorcycle parking spaces.

The City's Zoning Ordinance presently requires one parking space for each proposed residential unit on the peninsula (Sec. 14-332.1 (k). This requirement conflicts with if a development resides within the B-3 Zone then there is no off-street parking requirement for changes of use (14-332.1(e). A number of recent parking assessments and evaluations completed for similar Portland Peninsular development projects have concluded that parking demand rates significantly less are far more appropriate. As defined in Section 14-332 of the City's ordinance, "*the planning board may establish a parking requirement that is less than the normally required number of spaces upon a finding of unique conditions that result in a lesser parking demand*".

This document provides a summary review of recent parking utilization information assimilated for other recent peninsular development projects and augments that information with current peak parking data gathered at two apartment complexes on the Portland Peninsular. The data sources are summarized and a per unit parking demand rate is recommended for the proposed 139-unit apartment project.

PARKING DEMAND

A January 16, 2015 memorandum from Planning Staff to Members of the Planning Board proposing text amendments to the R-6 Residential Zone cites information presented in a housing study conducted by the Greater Portland Council of Governments that the percentage of households on the peninsular with 0 to 1 vehicle is 77% greater than the national average of 44%. The documents further states that, "*current trends can be found in several recent assessments for specific development proposals which have assessed the average need of the peninsular to be 0.48 spaces per apartment unit. Though parking space demand will vary across households, this assessment has been affirmed, and peer reviewed, in several recent studies that have accompanied development proposals to the Planning board*".

One study referenced in the noted memorandum is a March 26, 2014 study conducted by Gorrill-Palmer Consulting Engineers for the proposed 134 Washington Avenue Efficiencies project, where the study concluded based upon the collection of detailed parking occupancy counts, the appropriateness of a 0.48 parking space per apartment unit. The data presented in the report is repeated as follows:

53 Danforth Street: 43 total units ÷ 29 spaces occupied		= 0.67 spaces/unit
645 Congress Street: 56 units ÷ 28 spaces occupied		= 0.50 spaces/unit
Walker Terrace: 40 units ÷ 20 spaces occupied		= 0.50 spaces/unit
Oak Street Lofts: 37 units ÷ 16 spaces occupied		= 0.43 spaces/unit
Franklin Towers: 200 units ÷ 58 spaces occupied		= 0.29 spaces/unit
	AVERAGE:	= 0.48 spaces/unit

A second study dated June 2013 completed by Gorrill-Palmer, Inc. (GPI) for the 409 Cumberland Avenue Avesta Housing apartment project presented the results of their prior study findings as highlighted above and included additional parking occupancy data collected at the Island View Apartments, a 70-unit apartment complex located at the intersection of North and Walnut Streets. The apartment site contains a total of 84 parking spaces, with 29 of those spaces designated visitor parking. The supplemental parking information presented in the GPI study showed an average parking demand at this facility of 0.70 spaces/unit.

The combined findings of both parking study assessments would suggest the appropriateness of an average parking demand rate of 0.52 spaces [0.67 + 0.50 + 0.50 + 0.43 + 0.29 + 0.70 ÷ 6] = **0.52 spaces/unit.**

Parking occupancy data was recently collected at two Portland Peninsular apartment complexes, with one of the sites previously included in the GPI studies, to both validate and augment the earlier parking data. Parking occupancy counts were collected during both the early evening and early morning hours of the week of September 6, 2015 for time periods spanning three days. The two properties surveyed included: 1) 53 Danforth Street and 2) 409 Cumberland Avenue. Specific information related to the number and mix of apartment units are presented for each property as follows:

- 53 Danforth Street, located on Danforth Street near the intersection of High Street, is a 43 single and two-bedroom apartment complex that provides both covered and open parking lot spaces for the tenants of the building.
- 409 Cumberland Avenue, located on the corner of Cumberland Avenue and Forest Avenue, is a 57 unit apartment complex with a mix of efficiency, one, and two-bedroom units serviced with a limited number of both covered and open lot parking spaces for building tenants.

The following table 1 presents the results of the parking occupancy study:

Table 1
Parking Occupancy Study Summary

Apartment Site Location	Number of Units	September 10 Occupancy Data	September 11 Occupancy Data		September 12 Occupancy Data	Average Hourly Vehicles Parked	Average Parking Demand Rate
		7:00 PM to 8:00 PM	3:00 AM to 4:00 AM	7:00 PM to 8:00 PM	4:00 AM to 5:00 AM		
409 Cumberland Avenue	57	13	15	11	15	13.5	0.24 spaces
53 Danforth Street	43	17	22	27	21	21.75	0.51 spaces

The average parking occupancy rates (highlighted in red in the above table) determined from the results of the most recent parking study were combined with the data previously collected by GPI and a revised parking rate was calculated based upon the expanded data. The expanded parking data results in a slightly lower average parking demand rate of 0.48 spaces per unit or the same parking rate calculated by GPI in their March 26, 2014 parking assessment report.

The majority of the local parking survey data was collected generally during time periods that are considered representative of peak parking demand time periods. However, to conservatively estimate the peak parking demand requirements of the proposed 667 Congress Apartment project, the calculated average parking demand rate 0.48 spaces per unit was increased by an additional 20% to a peak parking rate of 0.58 spaces per unit.

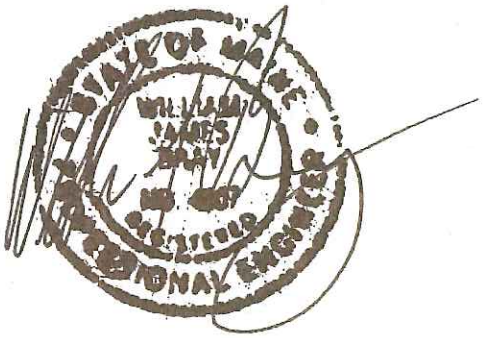
Accordingly, the proposed 667 Congress Street project generates a peak parking demand of **81** parking spaces [0.58 x 139 = 81 spaces].

SUMMARY

- The City in a January 2015 report to the Planning Board suggested the appropriateness of a reduced parking demand rate for peninsular apartment projects. The report references a recent study completed by the Greater Portland Council of Governments, which cites that United States census data shows that a very high percentage (approximately 77%) of households on the Portland Peninsular with 0-1 automobiles is considerably greater than the national average of 44%. Further, the report references several recent development parking assessments that determined the average parking demand requirement is likely near 0.48 spaces per unit.
- Gorrill-Palmer, Inc. prepared detailed parking assessment and evaluation reports for two recent apartment projects on the peninsular with the results showing a peak parking demand of 0.52 spaces per unit.
- Parking data recently collected at two apartment buildings on the Portland Peninsular during the month of September, when combined with the earlier GPI data, shows an average parking rate per unit of 0.48 spaces is reasonable for apartment projects located on the Portland Peninsular. The earlier parking studies conducted by GPI generally apartment projects that have a much greater number of 1 and 2 bedroom units than the proposed 667 Congress Street project. Approximately 20% (34 units) of the total number of units

proposed are efficiency units and it is fully anticipated that tenants in these units will likely use public transportation and/or other modes of transportation.

- The referenced PARKING GENERTATION publication concludes that, generally, peak parking demand for a high rise apartment building occurs between midnight and 5:00 AM. The majority of the parking survey data was collected during time periods prior to the early morning hours; therefore, to conservatively estimate the peak parking requirements of the proposed 139 unit apartment building the calculated per unit parking rate of 0.48 spaces was increased by roughly 20% to 0.58 spaces.
- Accordingly, the peak parking demand of the proposed apartment project is estimated at 81 spaces. A total of 78 parking spaces are provided on-site or three spaces less than the calculated parking demand of the project. The proposed apartment building design includes a U-Share parking space on the first floor of the proposed parking garage, which based upon Section 14.332 Parking paragraph a.3.b.a of the City's Zoning Ordinance grants a parking space credit equal to eight parking spaces. As a result, the proposed on-site parking supply exceeds the calculated parking demand of the 139 unit apartment project.
- The existing private leases within the existing parking lot will be discontinued with the sale of the property. The Project Team is not aware of any existing parking lease agreements required as a condition for a development or business permit with the City.



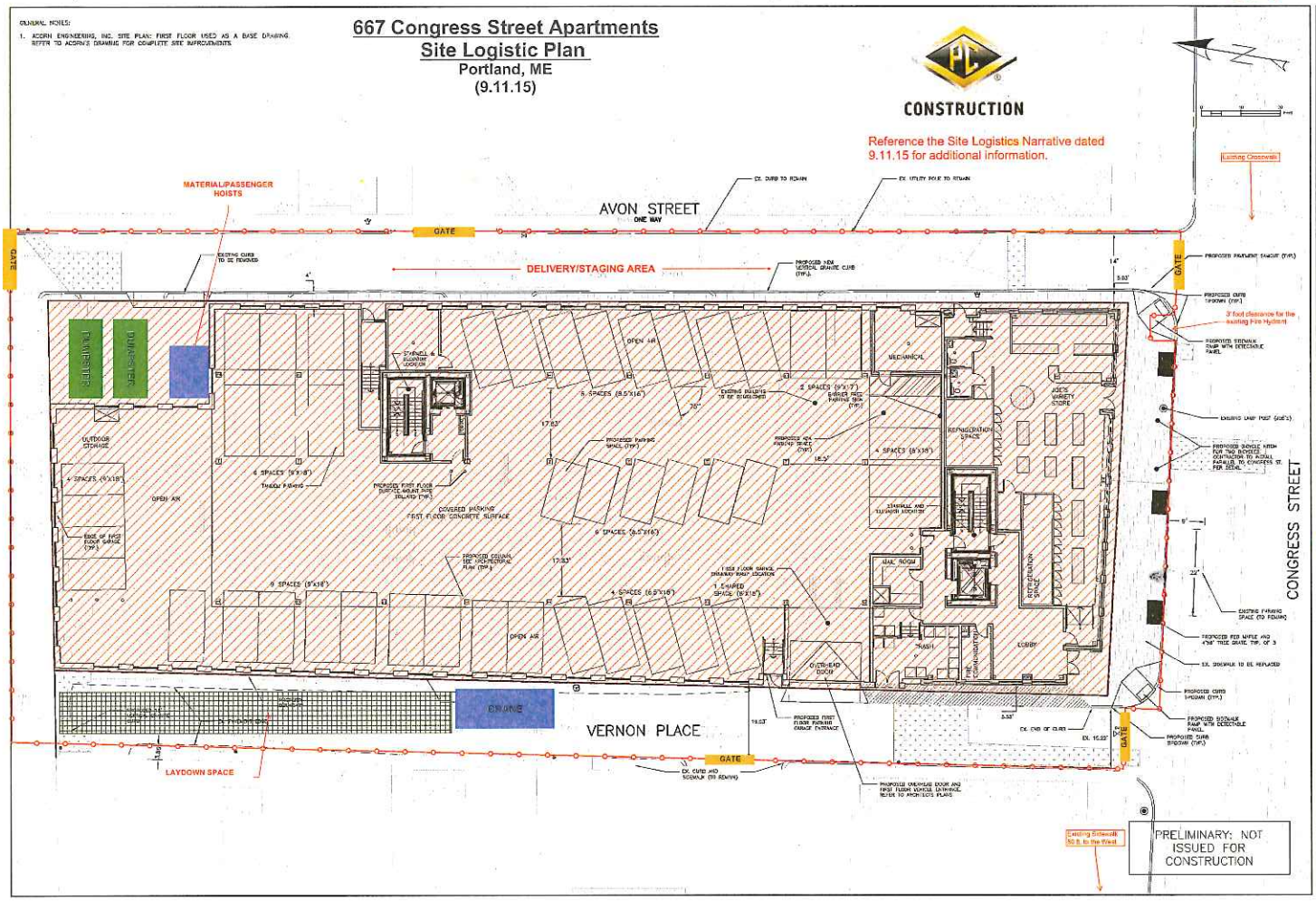
GENERAL NOTES:

1. ACORN ENGINEERING, INC. SITE PLAN: FIRST FLOOR USED AS A BASE DRAWING. REFER TO ACORN'S DRAWING FOR COMPLETE SITE IMPROVEMENTS.

667 Congress Street Apartments
Site Logistic Plan
Portland, ME
(9.11.15)

CONSTRUCTION

Reference the Site Logistics Narrative dated 9.11.15 for additional information.



ISSUED FOR

DATE

REVISION

NO.	DATE

CONSTRUCTION MANAGEMENT PLAN
667 CONGRESS STREET REDEVELOPMENT
REDFERN PROPERTIES, LLC.
P.O. BOX 9113 PORTLAND, MAINE, 04104

CONSTRUCTION

FILE	1060_CONGRESS
DATE	4/6/2015
JN	1060
SCALE	1"=30'
DESIGNED BY	
DRAWN BY	
CHECKED BY	

DRAWING NO.
CMP

Att. 17

CONSTRUCTION | AT PC WE GO ABOVE AND BEYOND ON EVERY JOB, PERIOD.

9.11.15

667 Congress Street Apartments
Site Logistic Narrative
Portland, ME

Reference the attached 667 Congress Site Logistic Plan dated 9/11/15 for an overview of the 667 Congress Street project.

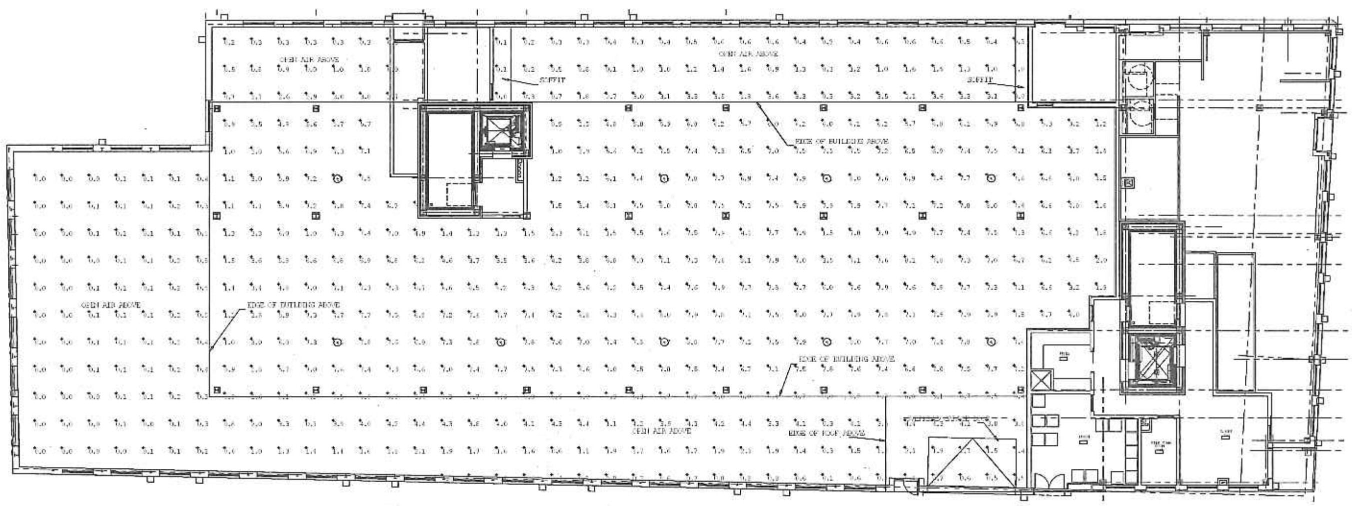
The construction approach for the 667 Congress Street project will be to start work on south end of the site along Congress St. and move north towards Deering St. The construction fence will extend to close both lanes of Avon Street and Vernon Place, the sidewalk along Congress Street, and north of the property line along the north end of the site. Temporary lane closures on Congress St will be required for utility tie-ins. Flagging and traffic control will be provided during all temporary lane closures. Safety and directional signage will be provided as necessary for pedestrian traffic. The gates shown at Avon St and Vernon Place are not intended to be secure, if so a Portland Fire Department Knox padlock will be used to allow access for the Fire Department. A Hot Work Permit from the Fire Department will be obtained for all cutting and welding operations.

The construction trailers will be located in a nearby off-site location and all PC Construction emergency contact information will be posted on-site. The closed lanes along Avon Street will be used as a staging area and delivery lane for materials and equipment. The project dumpsters will be located on the northeast corner of the project to allow for easy access to the delivery lane and the material and passenger hoists. The crane will be located in Vernon Place and the closed lanes will be used as laydown and staging space. All construction will comply 2009 NFPA 1 Chapter 16 Safeguards during Building Construction, Alteration, and Demolition Operations. There will be no on-site parking available for subcontractors, all subcontractors will be expected to use carpools/vans to the site and/or park in legal street parking spaces.

Key issues to be addressed include:

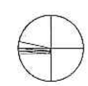
- Public Safety
- Coordination with City of Portland, Neighbors, and Utilities
- Coordination with FAA Requirements
- Ground Water Control/Treatment
- Waste Management and Site Clean-up
- Traffic and Pedestrian Management
- Coordination of Material Deliveries
- Laydown of Material Storage and Office Trailers
- Dust Control
- Clean Streets Surrounding the Project

Att. 18



Luminaire Schedule				
Qty	Label	LLF	Description	Lumens/Lamp
9	SL1	0.850	[illegible]	N.A.

Calculation Summary					
Label	Avg	Max	Min	Avg/Min	Max/Min
GARAGE CALC @ FLOOR	4.04	8.7	0.0	N.A.	N.A.



GENERAL DISCLAIMER:
Calculations have been performed according to IES standards and good practice. Some differences between measured values and calculated results may occur due to [illegible]

* LLF Determined Using Current Published Lamp Data

NOTE TO REVIEWER:
Total Light Loss Factor (LLF) applied at time of design is determined by applying [illegible]

For proper comparison of photometric layouts, it is essential that you have all designers use correct Light Loss Factors.

APEX LIGHTING SOLUTIONS

[illegible] STREET
MIDDLETOWN, CT [illegible]
TELEPHONE [illegible]
FACSIMILE [illegible]
www.[illegible].com

PROJECT TITLE:
667 CONGRESS STREET

DRAWING TITLE:
GARAGE LIGHTING
PHOTOMETRIC CALCULATIONS

FILE NAME: 667 Garage Calc [illegible]

SCALE: 1/8"=1'-0"
DATE: 9/10/15
DRAWN BY: CHV
SHEET:
GL-1

TEKDEK™ BASE
Luminaires for Parking Garages
TD17B SERIES

PROJECT INFORMATION

Job Name _____

Fixture Type _____

Catalog Number _____

Approved by _____

PRODUCT FEATURES:

- » Textured tertiary lens for glare reduction and up-light feature to eliminate "cave-effect"
- » Optical patterns designed for covered parking structures
- » Outputs ranging from 4,394 lm to 10,258 lm
- » Compatible with TekLink™ lighting control technology
- » Patented thermal management, and Optical Patents pending
- » 10 Year limited product warranty

SPECIFICATIONS

HOUSING: Marine-grade die-cast aluminum and UV-stabilized polycarbonate construction. Standard TGIC polyester power coat finish on aluminum components with five-step pre-treatment to withstand 1,000 hour salt spray test per ASTM B117. See Ordering Information for available finishes. Closed-cell silicone gasketing seals all housing component interfaces. Die-cut closed-cell neoprene self-adhesive gasket seals housing to mounting surface (DTS).

MOUNTING: Direct-to-surface (DTS) mounting over recessed junction box, Trunnion Mount (TK) or pendant-mounted (PM) via ¾" rigid sealed conduit. See Ordering Information for selection. Housing access secured via tamper-resistant Torx™ fasteners.

OPTICAL: Type II, V-Narrow and V-Square roadway distributions available. UV-stabilized, high-impact resistant injection-molded clear textured 100% DR acrylic or polycarbonate tertiary lens.

ELECTRICAL: Serviceable high-brightness LED array. See Ordering Information for color temperature and CRI options. 70 CRI minimum. 120-277 VAC, 347VAC and 480VAC 50/60Hz single-phase input; constant-current dimming driver; <20% THD, >0.90 PF. Minimum 90% electrical efficiency. 0-10V dimming protocol with 10-100% range, 2mA source current. Replaceable surge suppressor rated to 20kA/kV per IEEE/ANSI C62.41 Cat. A. EMC compliant with FCC 47 CFR Part 15, Class B.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For photometric data, please go to www.kenall.com.

WARRANTY: Limited ten (10) year warranty. Peace of Mind Guarantee℠ when ordered and installed with direct-to-surface (DTS) mounting and polycarbonate lens (TP).

LISTINGS: Luminaire is certified to UL Standards by Intertek Testing Laboratory for Wet Location. IP65 rating per IEC 60598. Suitable for installation into -30°C to 40°C ambient environments, unless otherwise noted. Product listed on DesignLights Consortium® Qualified Product List. Check the latest version here for listed configuration details.

LED | PEACE OF MIND Guarantee® POLYCARBONATE LENS & DIRECT SURFACE MOUNT ONLY | c ETL us | IP65 | DLC QPL LISTED | 2014 PROGRESS Report SELECTION

ORDERING INFORMATION (Ex: TD17B-PM-5N-TP-DB-52L-40K8-DCC-DV)

Model	Mounting	Dist. Type	Lens Type	Finish	Lamp Power	Lamp Color	Driver Type	Voltage	Options	Accessories	TekLink	Controls Kit
TD17B							DCC					< >

Mounting
- DTS* Direct-to-Surface
- PM Pendant Mount
- TK Trunnion Kit
- QM Quick Mount System

Distribution Type
- 2 Type II
- 2HSS Type II, House-side shield
- 5N Type V – Narrow Round
- 5S Type V – Wide Square

Lens Type
- TP* Textured Polycarbonate
- TA Textured Acrylic

Finish
- DB Dark Bronze
- FG Forest Green
- GW Reflectance White
- LG Light Gray
- MB Matte Black
- MW Matte White
- SL Silver
- CC Custom Color (Consult factory)

Lamp Power
- 52L 52W LED
- 79L 79W LED
- 112L 112W LED

Lamp Color
- 30K8 3000K/80CRI min
- 35K8 3500K/80CRI min
- 40K8 4000K/80CRI min
- 40K7 4000K/70CRI min
- 50K7 5000K/70CRI min
- 57K7 5700K/70CRI min

Driver Type
- DCC 0-10V Dimming Constant Current

Voltage
- DV 120-277 Volts (50/60Hz)
- 347 347 Volts (60Hz)
- 480• 480 Volts (60Hz)

Options
- LEL‡•† Emergency Battery Pack (0°C minimum ambient)
- GTD• Generator Transfer Device
- BG Bird Guard (click here for details)
- FS Single Fuse & Holder
- PH Phillips Fasteners
- A1•■ A1 Construction Override

Accessories
- DS Debris Shield

TekLink
- TL50§† TL50 Control System
- TL1000▾ TL1000 Wired Control System
- TL2000▾ TL2000 Wireless Control System

Please consult Kenall Applications when ordering Controls

Controls Kit
- < > Factory Assigned Internal Code

* Required for Peace of Mind Guarantee®
‡ Available only with 52L lamp
• A1 Construction (See page 3)
▾ A2 Construction (see page 3)
§ A3 Construction (see page 3)
† A2 Construction when LEL option and TL50 ordered together (see page 3)
■ For surface conduit option or matching other fixtures on schedule that have options with A1 construction

KENALL | www.kenall.com P: 800-4-Kenall F: 262-891-9701 10200 55th Street Kenosha, Wisconsin 53144

TEKDEK™ BASE
Luminaires for Parking Garages

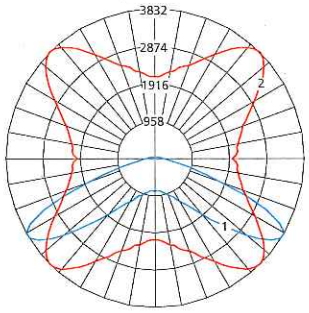
TD17B SERIEs

PERFORMANCE

	Initial Delivered Lumens, By Optic Type (lm)								
Lamp Code	2-TA	2-TP	5S-TA	5S-TP	5N-TA	5N-TP	Efficacy (lm/W)	Input Power (W)	Estd. L_{70} LED Life (Hrs)
52L-57K7	5,196	5,088	5,810	5,690	6,261	6,132	86 - 106	59	90,000
52L-50K7	5,196	5,088	5,810	5,690	6,261	6,132	86 - 106	59	90,000
52L-40K7	5,196	5,088	5,810	5,690	6,261	6,132	86 - 106	59	90,000
52L-40K8	4,724	4,625	5,282	5,172	5,691	5,574	78 - 96	59	90,000
52L-35K8	4,487	4,394	5,018	4,914	5,407	5,296	74 - 92	59	90,000
52L-30K8	4,487	4,394	5,018	4,914	5,407	5,296	74 - 92	59	90,000
79L-57K7	7,371	7,218	8,311	8,139	8,956	8,772	80 - 100	90	75,000
79L-50K7	7,371	7,218	8,311	8,139	8,956	8,772	80 - 100	90	75,000
79L-40K7	7,371	7,218	8,311	8,139	8,956	8,772	80 - 100	90	75,000
79L-40K8	6,701	6,562	7,556	7,399	8,142	7,975	73 - 90	90	75,000
79L-35K8	6,366	6,234	7,178	7,029	7,735	7,576	69 - 86	90	75,000
79L-30K8	6,366	6,234	7,178	7,029	7,735	7,576	69 - 86	90	75,000
112L-57K7	8,396	8,223	9,519	9,322	10,258	10,047	67 - 84	122	60,000
112L-50K7	8,396	8,223	9,519	9,322	10,258	10,047	67 - 84	122	60,000
112L-40K7	8,396	8,223	9,519	9,322	10,258	10,047	67 - 84	122	60,000
112L-40K8	7,633	7,476	8,654	8,475	9,325	9,133	61 - 76	122	60,000
112L-35K8	7,252	7,102	8,221	8,051	8,859	8,677	58 - 73	122	60,000
112L-30K8	7,252	7,102	8,221	8,051	8,859	8,677	58 - 73	122	60,000

Displayed information is for selected luminaires only. Information subject to change without notice. Visit www.kenall.com for .ies files and additional information.

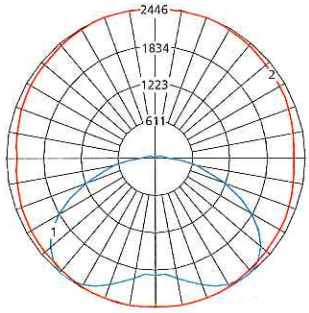
Model: TD17B-XX-5S-TA-GW-112L-40K7-DCC-DV



Max Candela = 3832 Located At Horizontal Angle = 45, Vertical Angle = 60

1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (60) (Through Max. Cd.)

Model: TD17B-XX-5N-TA-GW-112L-40K7-DCC-DV



Max Candela = 2446 Located At Horizontal Angle = 70, Vertical Angle = 40

1 - Vertical Plane Through Horizontal Angles (70 - 250) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (40) (Through Max. Cd.)

LUMEN AMBIENT TEMPERATURE (LAT) FACTORS

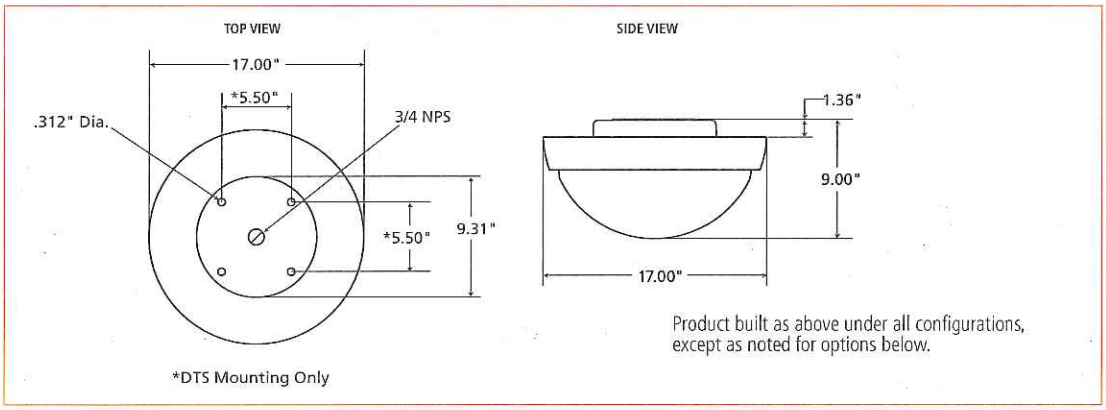
Avg. Ambient Temperature	10°C	15°C	20°C	25°C	30°C	35°C	40°C
Lumen Output Factor	1.03	1.02	1.01	1	0.99	0.98	0.97

www.kenall.com P: 800-4-Kenall F: 262-891-9701 10200 55th Street Kenosha, Wisconsin 53144

TEKDEK™ BASE
Luminaires for Parking Garages

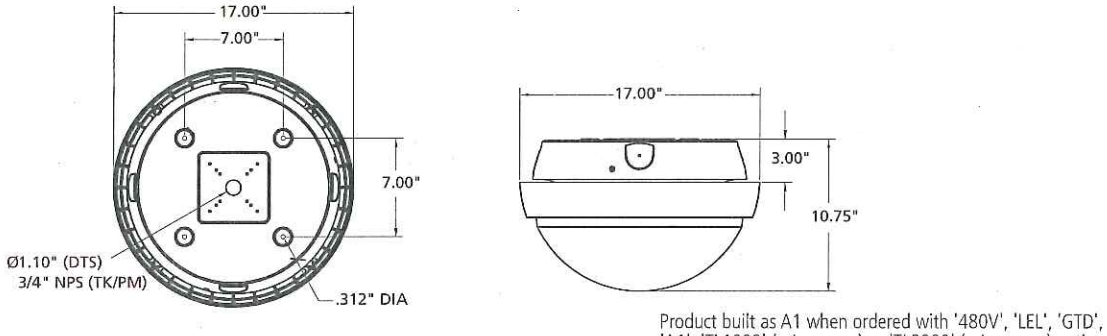
DIMENSIONAL DATA

FIXTURE DIMENSIONS



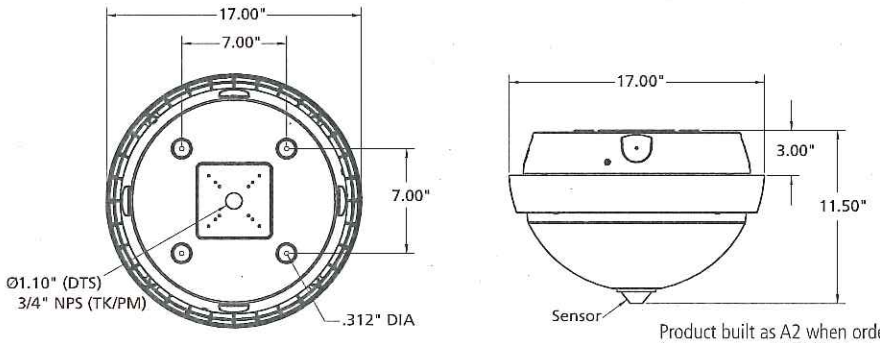
Product built as above under all configurations, except as noted for options below.

CONSTRUCTION 'A1' DIMENSIONS



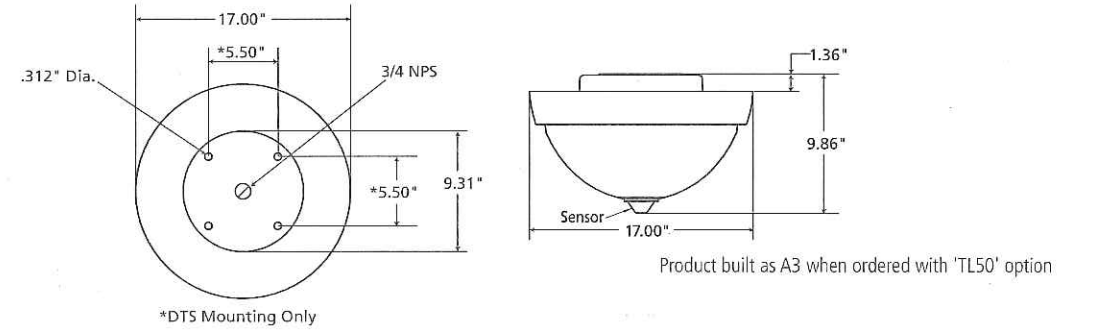
Product built as A1 when ordered with '480V', 'LEL', 'GTD', 'A1', 'TL1000' (w/o sensor) or 'TL2000' (w/o sensor) option

CONSTRUCTION 'A2' DIMENSIONS



Product built as A2 when ordered with 'TL1000' (w/ sensor), or 'TL2000' (w/ sensor) option

CONSTRUCTION 'A3' DIMENSIONS



Product built as A3 when ordered with 'TL50' option

www.kenall.com P: 800-4-Kenall F: 262-891-9701 10200 55th Street Kenosha, Wisconsin 53144

Att. 19

Urban Outdoor Wall Sconce

Lightology

Shown in: Bronze

List Price: $311.25
Our Price: $249.00

Shade Color: N/A
Body Finish: ~~Bronze~~
Lamp: 1 x LED/16W/120V
Wattage: 16W
Dimmer: Low Voltage Electronic
Dimensions: ~~16"H x 7"W x 2"D~~

Description:
Urban Outdoor Wall Sconce is available in a Black, White, Graphite or ~~Bronze finish~~. Available as a ~~small, medium or~~ large. 12/16/20 watt, 120 volt, 3000K LED lamp is included. ~~Small: 7 inch width x 10 inch height x 2 inch depth. Medium: 7 inch width x 16 inch height x 2 inch depth.~~ Large: 8 inch width x 22 inch height x 2 inch depth. ADA compliant, low profile design. Wet location listed and Dark Sky friendly.

Product Number: **MFR202088**					
Company:		Fixture Type:		Date:	Jul 22, 2015
Project:		Approved By:			

#1343WC-URBAN-007L1-BZDS

Address: 1718 W. Fullerton Ave. Chicago IL 60614 Phone: 866-954-4489 Fax: (773) 883-6131
www.Lightology.com

Written Request for Waivers

The existing commercial building and parking lot on 667 Congress St (Map, Book, Lot 46 C020 and C019) are to be redeveloped into a 139-unit residential and single unit commercial building with covered parking on the basement and first floors (81 total parking spaces). The existing business, Joe's Variety Store, will remain on the first floor with the upper seven floors consisting of studio, single bedroom, and double bedroom apartments for rent.

The following is a list of known project related waivers.

1. **City Standard Parking Size** – The applicant is requesting a waiver to increase the number of Compact Parking Spaces per Standard Parking Spaces (9' X 18'). Of the proposed 81 spaces, 64% are Standard spaces (52 spaces) and 36% may be defined as Compact Parking (29 spaces). According to the Technical Standards the maximum allowable Compact spaces for this space is 16. However, in order to adhere to the required parking spaces for residential units, there must be more compact parking within the covered lots.

   Circulation of vehicles within the site has been performed using AutoTurn, a vehicle circulation CAD accessory. The produced simulations show circulation to be possible; refer to the attached drawings of the simulations for additional information.

2. **City Minimum Driveway Width** – The applicant is requesting a waiver for the required 20' wide driveway; the proposed driveway is 18' wide at the overhead door but is otherwise 20' wide after entering the building.

3. **Parking Lot Landscaping** – The applicant is requesting a waiver to the parking lot landscaping requirements to not include the suggested 33 trees for the 81 parking spaces; due to the covered nature of the parking lots in both the basement and first floor (too limited of open air on first floor for tree or shrub growth), it is not feasible to landscape these features. However, after onsite discussions with Jeff Tarling, City Arborist, green walls are proposed along the exterior walls of the parking garage on Avon Street and Vernon Place.

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Voice: 207-775-2655 • Fax: 207-358-7979 • www.acorn-engineering.com

After continued discussions with Jeff Tarling, the applicant is prepared to contribute an amount proportionate to the cost of required parking lot trees minus that already spent on green spaces to the City of Portland Tree Fund.

4. **Street Trees** – The applicant is seeking a waiver to the street trees requirements for multi-family residential properties. Due to the large proposed building footprint and limited sidewalk space along the Avon Street and Vernon Place street fronts, it is not feasible to place the required 139 trees for every residential unit on-site. Instead, there will be three trees spaced approximately thirty feet apart along the Congress Street frontage (refer to site plans); this represents the maximum amount of trees able to fit on the property. In all, the design decreases the total required street trees from 139 to 3. However, this is an increase in total trees on the property from the original one.

   Like abovementioned, there is additional proposed landscaping including shrubs along Vernon Place and the rear property line, plantings along Avon Street, and raised urban planters along Congress Street in addition to the parking garage green walls. The exact location of landscaped areas is outlined in the attached Landscaping Plan.

5. **Minimum Requirements for Street Improvements** – The applicant is seeking a waiver for the required curb and sidewalk improvements along Vernon Place and Avon Street; the city requires new sidewalk with granite curbing for the entirety of the existing unimproved street.

   Along Vernon Place, the current plans propose sidewalk improvements such as construction of a brick sidewalk with granite curbing that tips down to a flush, stamped pavement sidewalk continuing to the first floor garage entrance allowing for an alternative to Congress Street for Joe's vendor drop-offs. The remaining building edge along Vernon Place will be landscaped in most areas of existing grass. Although a sidewalk will be not be constructed along its entirety, Vernon Place is a dead-end street with limited foot traffic and, under the proposed plans, will be improved significantly given the current conditions.

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It is proposed that Avon Street be widened from the existing 14' to 16' per request (Captain Gauteau 8/21/15) in place of an improved sidewalk along both sides of the street; the remaining space between the building edge and new/reset granite curb will be replaced with assorted plantings. The existing sidewalk along the Trelawny building is planned to remain.

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Att. 21

TRANSPORTATION DEMAND MANAGEMENT PLAN

FOR

PROPOSED

"667 Congress Street Apartments"

Prepared For: Redfern Properties, LLC
Prepared By: William J. Bray, P.E.

September, 2015

TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN

Project Description
Redfern Properties, LLC is proposing construction of an eight-story apartment building at 667 Congress Street on a parcel of property bordered by Congress Street, Avon Street, and Vernon Place. The subject property is located on the peninsular within the Downtown Business Zone (B-3). Joe's Smoke Shop, a 3,673 square foot neighborhood variety store, presently occupies the Congress Street/Avon Street corner of the proposed site and the remainder of the site is a paved parking lot with a total of 63 spaces.

The proposed project will provide a total of 139 apartment units that will include 34 efficiency units, 97 one-bedroom units, and 8 two-bedroom units. The proposed building design provides a total of 81 parking spaces with 37 of the spaces located in the basement level of the building and the remaining 44 spaces on the first floor of the building. Three of the 81 total spaces are reserved for Joe's Smoke Shop resulting in a total of 78 spaces for tenants of the building. In addition, secured covered space is reserved for bicycle parking (total space for 52 bicycles), 4 exterior bicycle parking along Congress Street, and a private auto share service, and three motorcycle parking spaces.

Transportation Narrative
The proposed project's location on Congress Street between both Congress and Longfellow Squares provides numerous multi-modal transportation opportunities for tenants of the proposed apartment building. From the perspective of automobile transportation, the Project's location is well suited with easy and direct access to Commercial Street and the Casco Bay Bridge to the south, other destinations along the Congress Street corridor both east and west of the proposed site, and direct roadway interchange connections to Interstate 295 (I-295) both north and south. An extensive and well maintained sidewalk system provides building tenants with both convenient and safe walking routes to virtually all points of destination on the Portland Peninsular, including: employment opportunities, recreational facilities, daytime and evening entertainment venues, Maine Medical Center and Mercy Hospital campuses, parks, cultural centers, restaurants, public library, and other amenities.

The project location is only a few City blocks from the Casco Bay Ferry Terminal and METRO Bus provides their highest frequency of service to the Congress Street corridor via: 1) Route 1 - Congress Street; 2) Route 8 - Peninsular Loop and; 3) Routes 9A/9B – Crosstown Loop. Refer to the attached METRO routing information as an appendix to the report.

A combination of rental incentives: proposed group rate METRO ticket program, the extensive sidewalk network along the Congress Street corridor, and the encouraged and promoted use of other modal transportation opportunities will ensure successful compliance with the City's transportation and sustainability goals.

Transportation Coordinator
The Building Management Company retained by Redfern Properties will serve as the TDM coordinator for the property. The management team will be fully versed in the transportation services available to perspective tenants of the building. Each new building tenant, in a pre-lease interview with the property management team, will receive a packet containing information on the availability of transportation (all modes) services.

Parking Demand Calculation
The City's Zoning Ordinance presently requires one parking space for each proposed residential unit on the peninsula (Sec. 14-332.1 (k)). This requirement conflicts with if a development resides within the B-3 Zone then there is no off-street parking requirement for changes of use (14-332.1(e)). A number of recent parking assessments and evaluations completed for similar Portland Peninsular development projects have concluded that parking demand rates significantly less are far more appropriate. As defined in Section 14-332 of the City's ordinance, "*the planning board may establish a parking requirement that is less than the normally required number of spaces upon a finding of unique conditions that result in a lesser parking demand*".

A detailed parking study completed in support of the proposed project and submitted under separate cover, clearly documents that the peak parking demand rate for an apartment building with a "high" percentage of efficiency and 1-bedroom units is considerably less than the one space requirement. The detailed parking study concluded that a per unit parking demand rate of 0.58 spaces per unit was appropriate.
Accordingly, the peak parking demand of the proposed apartment project is estimated at 81 spaces. A total of 78 parking spaces are provided on-site or three spaces less than the calculated parking demand of the project. The proposed apartment building design includes a private auto share service with a preferred parking space location close to the elevator on the first floor of the proposed parking garage; Section 14.332 Parking paragraph a.3.b.a of the City's Zoning Ordinance grants a parking space credit equal to eight parking spaces for an on-site shared vehicle program. As a result, the calculated peak parking demand of the proposed 667 Congress Street Apartments is met and exceeded by a total of five parking spaces.

Parking Description
The proposed building design provides a total of 81 parking spaces with 37 of the spaces located in the basement level of the building and the remaining 44 spaces on the first floor of the building. Three of the 81 total spaces are reserved for Joe's Smoke Shop resulting in a total of 78 spaces reserved for tenants of the building. In addition, secured covered space is reserved for bicycle parking (total space for 52 bicycles), 4 exterior bicycle parking along Congress Street, a private auto share service, and a minimum of three scooter/motorcycle parking spaces. A total of (22) 2-hour metered parking spaces exist on Congress Street between Longfellow and Congress Squares with operational hours of 9AM to 6:00PM, additionally, (10) 30-miniute commercial loading zone spaces and (4) 15-minute loading parking spaces are found curbside within the same designated section of Congress Street.

Parking and Trip Reduction Strategies
Unbundling Rent and Parking Fees: Studies have shown that simply charging tenants separately for rent and parking significantly reduces parking demand. When presented with the cost/benefit decision, tenants often choose not to buy parking, opting for less convenient and less costly parking options or choosing to go carless.

Bicycle Facilities: A total of 56 bicycle spaces are provided in the building design conforming to the City's Site Plan requirements. The 52 enclosed bicycle racks will be located on the basement level within a secure room. The bicycle racks will be wall or floor mounted and be manufactured by Dero (or approved equivalent). Four (4) additional bicycle spaces will be provided along Congress Street for residents and the general public. Local and regional bicycle route and facility information will be available to tenants at the proposed building transportation services "kiosk" located in the building entry area.

METRO Bus Service: Each building tenant will receive, in their tenant packet, a ten-ride METRO bus pass and a copy of METRO's bus route schedule information. METRO bus service information will be strategically posted throughout the building and located on the transportation service "kiosk" in the building entry areas. Redfern Properties is currently working with METRO to develop a bulk purchasing transit pass program for tenants of the building.

Private Auto Share Service: The proposed 667 Congress Street Apartments site will provide a private auto share service on the first floor of the proposed parking garage. This will be a preferred parking space near the elevator, pedestrian and vehicular entrance. Redfern Properties will purchase an electric car for the shared use of tenants. This program will follow the model of other apartment communities and should be self-sustaining.

Scooter/Motorcycle Parking: At least three spaces are provided within the proposed parking garage for designated scooter and motorcycle parking. Additional space opportunities are possible if needed based upon tenant use.

Pedestrian Facilities: The TDM Coordinator will work with building tenants in promoting walkability to "key" places of significance including: Casco Bay Transit, Cross Insurance Arena, Portland Public Library, Public

Museum, Hadlock Field, Expo Recreational Facilities, Hospitals, local restaurants, and other cultural facilities etc. To aid in this endeavor, a detailed map of the Portland Peninsular will be strategically located in the building entry area that identifies "key' destination points and the approximate distances in reaching them on foot.

Recreational Trails: The destination map located on the transportation "kiosk" will identify the extensive network of public trails on the peninsular with the goal of encouraging greater use.

Tenant Information Packet (Transportation Related Services): Each building tenant will receive a welcoming package that includes the following transportation services information:

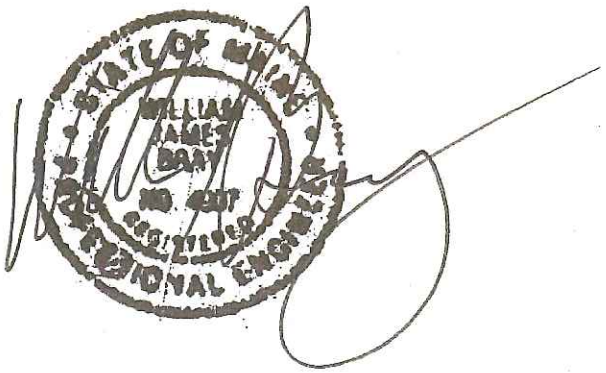
- METRO Bus - Routes and Schedules
- South Portland Bus – Routes and Schedules
- Casco Bay Transit – Boat Schedules
- RTP Service Availability with contact information
- Bicycle Short and Long Distance Routing Information
- Rideshare Information on existing programs including contact information
- Portland Trails System Map
- Private auto share service (program information)

The building transportation "kiosk", located in the entry area of the proposed building, will have copies of all transportation services information including tri-fold brochures from all major transportation service providers.

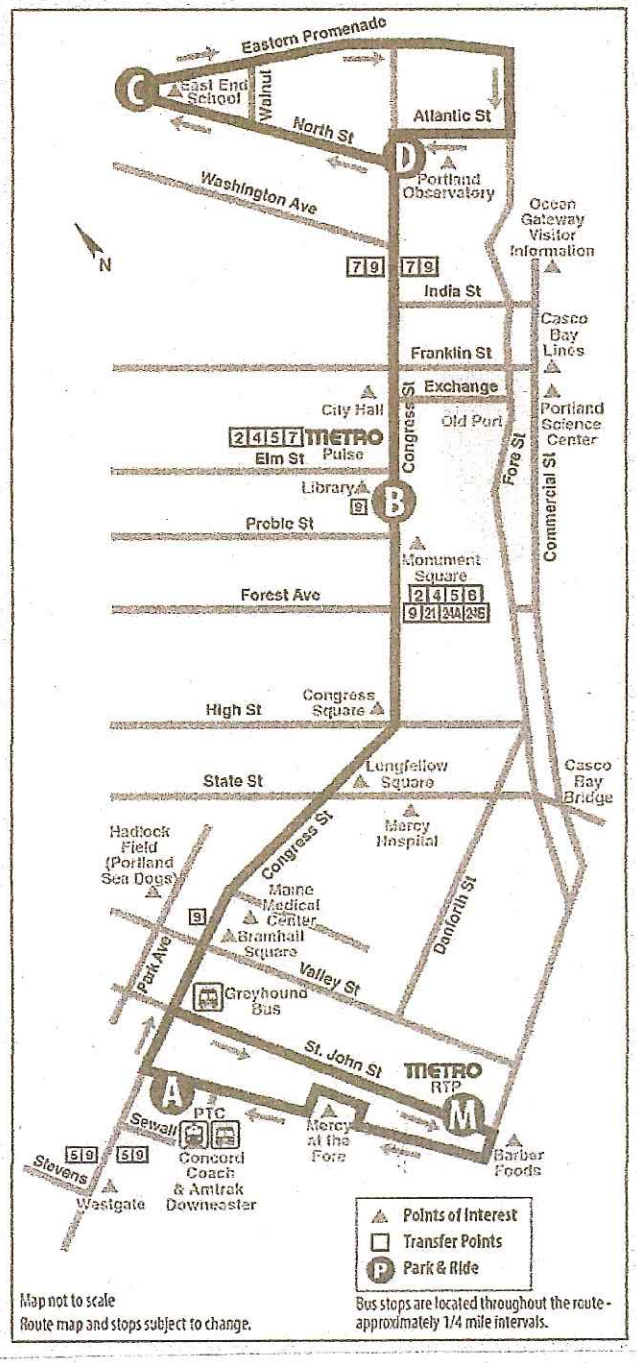
Tenant Survey/Monitoring

The Building Management Company serving as the TDM Coordinator for the property will conduct an annual survey with all building tenants that identifies and quantifies transportation practices of building tenants including the frequency and utilization rates of other modes of transportation; tenant concerns, issues, and transportation services needs. The survey and tenant questionnaire format and information search will be developed in concert with the City's TDM Manager and modified as directed. The survey results will be summarized with the results shared with each building tenant. A copy of the survey results will be posted on the transportation "*kiosk*" located in the entry area of the proposed building.

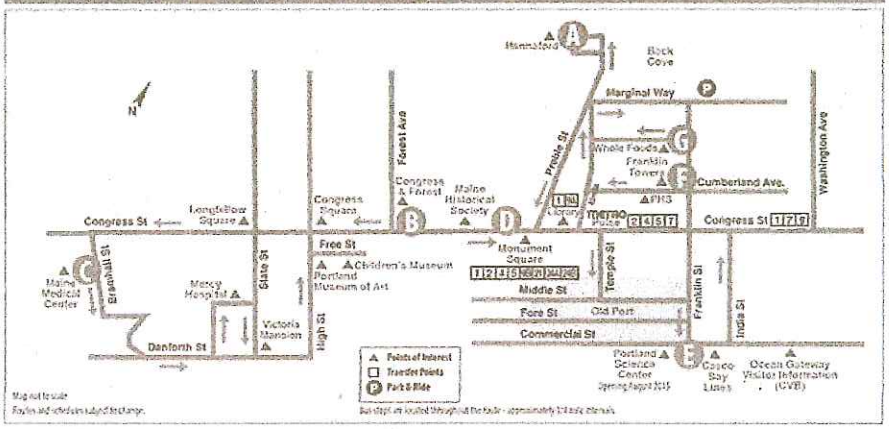
Further, the building management team will also measure, during a "typical" day of the year, both parking space occupancy and turnover rates of the 78 designated parking spaces in the proposed building parking areas. A summary of the data will provide critical information in determining the adequacy of the property parking supply and whether the level of tenant parking is adequate to meet the needs of the tenants. The property management team will consider whether adjustments to the TDM plan are required; such as, providing additional or increased incentives to tenants to use other modes of transportation, conduct more frequent tenant meetings where special emphasis is placed on other modal travel opportunities, modification to building parking space allocation increasing the number of scooter or motorcycle and/or bicycle parking opportunities, etc.



METRO ROUTE 1 Congress Street



METRO ROUTE 8 Peninsula Loop



Map not to scale
Routes and schedules subject to change.

Bus stops are located throughout the route - approximately 1/4 mile intervals.

MONDAY THROUGH FRIDAY
PENINSULA LOOP to CASCO BAY LINES

Hannaford Plaza (A)	Congress & Forest (B)	Maine Medical (C)	Monument Square (D)	Casco Bay Lines (E)	Franklin Towers (F)	Whole Foods (G)	Hannaford Plaza (A)
				6:40	6:47	6:55	7:05
	6:44	6:50	7:02	7:10	7:17	7:25	7:35
7:05	7:10	7:20	7:32	7:40	7:47	7:55	8:05
7:35	7:40	7:50	8:02	8:10	8:17	8:25	8:35
8:05	8:10	8:20	8:32	8:40	8:47	8:55	9:05
8:35	8:40	8:50	9:02	9:10	9:17	9:25	9:35
9:05	9:10	9:20	9:32	9:40	9:47	9:55	10:05
9:35	9:40	9:50	10:02	10:10	10:17	10:25	10:35
10:05	10:10	10:20	10:32	10:40	10:47	10:55	11:05
10:35	10:40	10:50	11:02	11:10	11:17	11:25	11:35
11:05	11:10	11:20	11:32	11:40	11:47	11:55	12:05
11:35	11:40	11:50	12:05	12:14	12:22	12:30	12:40
12:05	12:10	12:20	12:35	12:44	12:52	1:00	1:10
12:40	12:45	12:55	1:10	1:19	1:27	1:35	1:45
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5:00	5:05	5:15	5:30	5:39	5:47	5:55	6:00
5:30	5:35	5:45	6:00	6:09	6:15		
6:00	6:05						

SATURDAY
PENINSULA LOOP to CASCO BAY LINES

Hannaford Plaza (A)	Congress & Forest (B)	Maine Medical (C)	Monument Square (D)	Casco Bay Lines (E)	Franklin Towers (F)	Whole Foods (G)	Hannaford Plaza (A)
		7:50	8:02	8:10	8:17	8:25	8:35
8:35	8:40	8:50	9:02	9:10	9:17	9:25	9:35
9:35	9:40	9:50	10:02	10:10	10:17	10:25	10:35
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11:35	11:40	11:50	12:02	12:10	12:17	12:25	12:35
12:35	12:40	12:50	1:02	1:10	1:17	1:25	1:35
1:35	1:40	1:50	2:02	2:10	2:17	2:25	2:35
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3:35	3:40	3:50	4:02	4:10	4:17	4:25	4:35
4:35	4:40	4:50	5:02	5:10	5:17	5:25	5:35
5:35	5:40	5:50	6:02	6:10	6:17		

SUNDAY
PENINSULA LOOP to CASCO BAY LINES

Hannaford Plaza (A)	Congress & Forest (B)	Maine Medical (C)	Monument Square (D)	Casco Bay Lines (E)	Franklin Towers (F)	Whole Foods (G)	Hannaford Plaza (A)
				9:10	9:17	9:25	9:35
9:35	9:40	9:50	10:02	10:10	10:17	10:25	10:35
10:35	10:40	10:50	11:02	11:10	11:17	11:25	11:35
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2:35	2:40	2:50	3:02	3:10	3:17	3:25	3:35
3:35	3:40	3:50	4:02	4:10	4:17	4:25	4:35
4:35	4:40	4:50					

Visiting Portland?

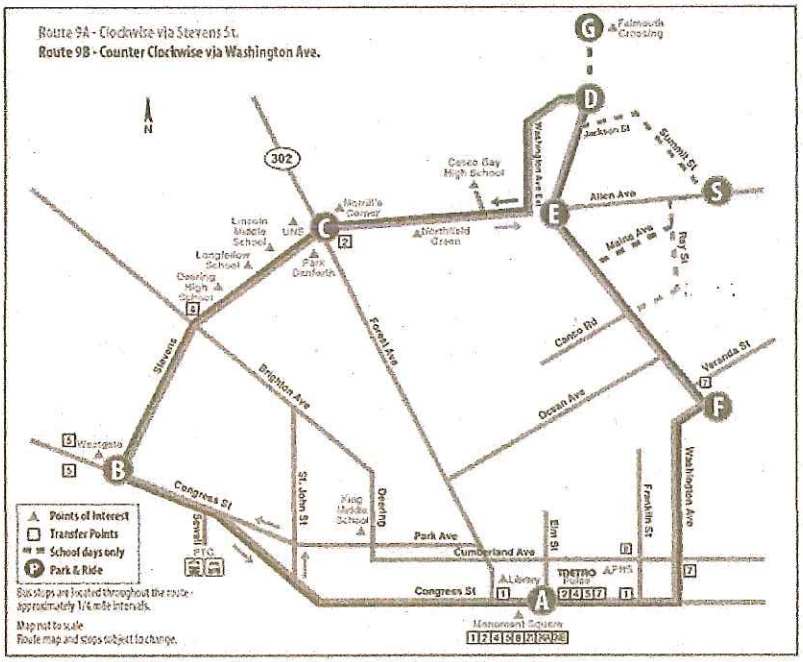
Hop on METRO Route #8 for an affordable, accessible and scenic ride throughout downtown Portland. Travel from Ocean Gateway and the waterfront.

See the Longfellow Statue and Victoria Mansion along Portland's historic West End.

Travel through the Old Port to Casco Bay Lines Ferry Terminal to attractions, shopping and dining along Portland's waterfront.

METRO ROUTE 9A

METRO ROUTE 9B



MONDAY THROUGH FRIDAY
CROSSTOWN LOOP VIA STEVENS AVENUE

Library (A)	Westgate (B)	Morrill's Corner (C)	Washington Auburn (D)	Summit St./ Allen Ave (S)	Allen's Corner (E)	Washington Veranda (F)	Library (A)
5:35	5:50	6:00	6:10		6:13	6:23	6:35
6:05	6:20	6:30	6:40		6:43	6:53	7:05
6:15*	6:30*	6:40*	6:50*	6:55*		7:05*	7:25*
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6:45*	7:00*	7:10*	7:20*	7:25*		7:43*	7:55*
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8:35	8:50	9:00	9:10		9:13	9:23	9:35
9:35	9:50	10:00	10:10		10:13	10:23	10:35

* Trips operate on school days only. On early release days, trips will operate one hour earlier.

SATURDAY
CROSSTOWN LOOP VIA STEVENS AVENUE

Library (A)	Westgate (B)	Morrill's Corner (C)	Washington Auburn (D)	Allen's Corner (S)	Washington Veranda (F)	Library (A)
7:35	7:50	8:00	8:10	8:13	8:23	8:35
8:35	8:50	9:00	9:10	9:13	9:23	9:35
9:35	9:50	10:00	10:10	10:13	10:23	10:35
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8:35	8:50	9:00	9:10	9:13	9:23	9:35
9:35	9:50	10:00	10:10	10:13	10:23	10:35

ACORN ENGINEERING, INC.

Shukria Wiar - Planner
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101

October 13, 2015

Subject: 667 Congress Street Redevelopment
Comment Response Letter: Final Application

On behalf of Redfern Properties, LLC, Acorn Engineering, Inc. (Acorn) is pleased to respond to the comments to the 667 Congress Street Redevelopment Final Application that have been provided by multiple reviewers.

It is our opinion that many of the comments that were provided are of such nature that they either do not require a response, or have been adequately addressed at the 9/29/15 Planning Board Meeting or in a prior submission. The responses to any such comments have been omitted from this letter.

To facilitate the review, comments are provided below in italics followed by Acorn Engineering, Inc.'s response.

Tom Errico – 9/23/2015 E-mail

Comment – *The plans note that the sidewalk on Vernon Place will not have curbing. I will review this with DPS staff. Status: I continue to review design treatments for Vernon Place given its unique function. As noted below, the applicant shall complete the formal waiver process for curb and sidewalk. The City needs to be comfortable with the design and function of Vernon Place with the added project traffic (traffic volumes will increase substantially from current conditions). Specifically accommodating pedestrians safely, vehicle movements, DPS maintenance equipment and their ability to turn around safely, landscaping, drainage, and access/egress movements into and out of the garage and the driveways on the west side of the street.*

Response – In recognition of comments received at our 9/28/15 Meeting with Planning Staff, Fire Department and Traffic Peer Review Engineer, Acorn has added a 4' wide sidewalk with vertical curb within Vernon Place. The sidewalk will extend between the pedestrian entrance to the First Floor Parking facility and Congress Street in order to provide separation between the vehicular traffic and pedestrian traffic. The overall existing roadway width in areas with a proposed sidewalk was increased from 14.18' to 16.8'. Further to the North on Vernon Place the roadway width will be increased from 14.95' to 18.5'. This additional width will improve upon the existing circulation and access/egress into the driveways along the west side of Vernon Place.

Comment -- *The alignment of the sidewalk ramps on Congress Street will need to direct pedestrians to the appropriate path of travel from an ADA perspective. Adjustments will need to be incorporated. Status: The ramp at corner of the Avon Street is unacceptable and alignment for walking parallel to Congress Street shall be provided. I would also note that the ramp at Vernon Place may need to change following the final configuration of the street.*

Response – Acorn has provided a revised design for pedestrian ramps at these locations. The ramps are designed to be parallel to the ROW line at the proposed development along Congress Street and have been relocated for the current proposed roadway configuration.

Comment – *The width of the sidewalk along Avon Street abutting the property is noted as between 3 and 5 feet wide. I need to review specific details regarding this sidewalk to ensure appropriate accessibility is provided. Status: Given the narrow width of the street and sidewalk, I recommend that a fully shared street be considered (curbs to be removed or relocated to buildings on both sides of the street with special surface pavement treatment). This would allow for improved or desired emergency access, easier maintenance, and would allow for a multi-modal street that would provide for all users in a safe and calmed environment.*

Response –We have further refined and revised the Avon Street corridor. The project team is now proposing a number of traffic calming measures including raised pedestrian crosswalk with curb extension located half-way along Avon Street, outside of the proposed side tenant entrance. A curb extension is also proposed at the Congress Street crosswalk with Avon. In recognition of the Captain Gautreau's concerns and following discussions from our 9/28/15 Meeting with Planning Staff, Fire Department and Traffic Peer Review Engineer the street width adjacent to the Trelawny building has been increased by approx. 25%, from 14' to 18'-width. Elsewhere the roadway width was increased from 14' to 16' width. Furthermore the applicant is proposing to increase the aerial clear width between buildings by removing the two existing utility poles with street lights and relocate the utilities subsurface with lighting mounted to the applicant's building.

Comment – *The applicant should identify any parking circulation aisle waiver requirements.*

Response – Because the majority of parking need is residential, the proposed lot is defined as a low turnover lot and can therefore support a more compact layout than a typical public parking lot. The proposed layout includes for a 75-degree angle at parking spaces, with the recommended one-way drive aisle width of 17.83'. The City's Technical Manual does not have a standard aisle width associated with a 75 degree parking space; this being the case, the parking lot layout was designed using criteria published by Carl Walker, Inc., an engineering firm that specializes in parking structure design. With this being the case, the applicant is requesting this flexibility in the form of a waiver for a 17.83'-wide one-way drive aisle width.

Comment – *The applicant should provide information on how the tandem parking spaces will be managed.*

Response – Tandem parking spaces will be coordinated by the Building Management Company retained by Redfern Properties and serve as the Transportation Demand Management (TDM) coordinator in accordance with Traffic Solutions' TDM Plan, dated September 2015.

Comment – *The applicant should confirm that one handicapped parking space meets ADA or other required standards.*

Response – ADA parking spaces have been increased to a total of 4 ADA parking spaces with preferred locations adjacent to ADA accessible points of entry.

David Margolis-Pineo – 9/22/2015 E-mail

Comment – *The design of all corner sidewalk ramps will require approval of the City's Bike/Ped Coordinator, Bruce Hyman. The current shown ramp alignment does not appear acceptable.*

Response – Please see previous comment regarding sidewalk ramps.

Comment – *It appears that the proposed building foundation and underdrain system may be encroaching the street right of way. If so an easement/license will be required from the City and shown on the Recording Plat.*

Response – The building foundation and underdrain system as presently designed will not encroach upon the street right of way. The applicant is proposing to grant three easements to the City including:

- Roadway easement to the City
- Pedestrian easement to the City
- Drainage easement to the City

One easement will be requested from the City for the construction of a wall anchor system (also referred to as a soil nail wall). Wall anchors are routinely used in high-density structures in Boston, and a similar temporary soil nail system was installed at Maine Medical Center along Charles Street. The system provides temporary shoring until the basement wall structure is built, but will remain in place after project completion. Whereas the soils nails are only needed temporarily during construction, future excavation for utility work in the location of the soil nails would not hinder the building walls. This ability to remove the wall anchors after construction for future utility work is included within the Subdivision Plat. Please refer to the included Subdivision Plat for additional information.

Comment – *Any underground or overhead utilities which feed adjacent infrastructure which cross but are not related to this development shall have easements recorded and shown on the Recording Plat.*

Response – A Subdivision Plat has been provided as part of this submission that indicates existing and proposed easements for the development, which includes easements for utilities.

Comment – *A stamped Recording Plat is required with plan set.*

Response – A Subdivision Plat stamped by a Professional Land Surveyor has been provided as part of this submission.

Comment – *The existing sewer on Congress St is a combined sewer. Therefore a backflow preventer on the proposed 6" sewer lateral is required.*

Response – Per Note 5 on Sheet C-20 regarding sewer utilities, a backflow preventer is to be placed by M.E.P. (Mechanical/Electrical/Plumbing Engineer) within the building at this and all other sewer connections.

David Senus (Civil Engineering) – E-mail on 9/18/15

Comment – *Based on comments received from the City Department of Public Services, the Applicant has revised the outlet from the Oil/Water Separator to connect to the sanitary sewer in Avon Street. The flow into the Oil/Water Separator is intended to solely include drainage from the floor drains from the two covered parking deck areas; however, on Sheet C30 it appears that an underdrain connection is proposed into the floor drain system. All underdrains should be connected into the separated storm drain system.*

Response – Roof drains and foundation drains have been revised to connect into the separate storm drain system.

Comment – *Sheet C31 shows the floor drain locations for the upper parking deck. These locations are reflected on Sheet C30 as "first floor downspouts". Are these downspouts discharging to the surface of the lower parking deck or connecting directly into the lower parking area floor drain system? If connecting directly, this should be depicted on C30.*

Response – The First Floor downspouts are proposed to connect into the lower parking area floor drain system; this is now clearly reflected within Sheet C-30.

Thank you very much for your detailed review of the proposed development. Please let me know if you have any additional questions or comments.

Sincerely,

William H. Savage, P.E.
Principal - Project Manager
Acorn Engineering, Inc.

Attachments:

1. Updated – Written Request for Waivers, dated 10/13/15
2. Acorn Engineering – Plan Set, Issued For "Final Application" and dated 10/13/15

Written Request for Waivers

The existing commercial building and parking lot on 667 Congress St (Map, Book, Lot 46 C020 and C019) are to be redeveloped into a 139-unit residential and single unit commercial building with covered parking on the basement and first floors (81 total parking spaces). The existing business, Joe's Variety Store, will remain on the first floor with the upper seven floors consisting of studio, single bedroom, and double bedroom apartments for rent.

The following is a list of known project related waivers.

1. **City Standard Parking Size** – The applicant is requesting a waiver to increase the number of Compact Parking Spaces per Standard Parking Spaces (9' X 18'). Of the proposed 81 spaces, 68% are Standard spaces (55 spaces) and 32% may be defined as Compact Parking (26 spaces). According to the Technical Standards the maximum allowable Compact spaces for this space is 16. However, in order to adhere to the required parking spaces for residential units, there must be more compact parking within the covered lots.

   Circulation of vehicles within the site has been performed using AutoTurn, a vehicle circulation CAD accessory. The produced simulations show circulation to be possible; refer to the previously submitted circulation drawings of the simulations for additional information.

2. **City Minimum Driveway Width** – The applicant is requesting a waiver for the required 20' wide driveway; the proposed driveway is 18' wide at the overhead door but is otherwise 20' wide after entering the building.

3. **Parking Lot Landscaping** – The applicant is requesting a waiver to the parking lot landscaping requirements to not include the suggested 33 trees for the 81 parking spaces; due to the covered nature of the parking lots in both the basement and first floor (too limited of open air on first floor for tree or shrub growth), it is not feasible to landscape these features.
   However, after onsite discussions with Jeff Tarling, City Arborist, green walls are proposed along the exterior walls of the parking garage along Vernon Place, and three green walls along the rear property line.

   After continued discussions with Jeff Tarling, the applicant is prepared to contribute an amount proportionate to the cost of required parking lot trees minus that already spent on total landscaping to the City of Portland Tree Fund.

4. **Street Trees** – The applicant is seeking a waiver to the street trees requirements for multi-family residential properties. Due to the large proposed building footprint and limited sidewalk space along the Avon Street and Vernon Place street fronts, it is not feasible to place the required 139 trees for every residential unit on-site. Instead, there will be three trees spaced approximately thirty feet apart along the Congress Street frontage (refer to

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Voice: 207-775-2655 • Fax: 207-358-7979 • www.acorn-engineering.com

site plans); this represents the maximum amount of trees able to fit on the property. In all, the design decreases the total required street trees from 139 to 3. However, this is an increase in total trees on the property from the original one.

5. **Minimum Requirements for Street Improvements** – The applicant is seeking a waiver for the required curb and sidewalk improvements along Vernon Place and Avon Street; the city requires new sidewalk with granite curbing for the entirety of the existing unimproved street.

   Along Vernon Place, the current plans propose sidewalk improvements such as construction of a brick sidewalk with granite curbing that tips down to a flush brick sidewalk continuing to the first floor garage entrance allowing for an alternative to Congress Street for pedestrians. The remaining building edge along Vernon Place will be landscaped in most areas of existing gravel/guardrail.

   It is proposed that Avon Street be widened from the existing 14' to 18' per request (Captain Gautreau 9/28/15) in place of an improved sidewalk along both sides of the street in all locations adjacent to the Trelawny building, and at least 16' in other locations (such as the sidewalk). The existing sidewalk along the Trelawny building is planned to remain.

6. **Minimum Drive Aisle Width** – The applicant is seeking a waiver for the required minimum drive aisle width; the city has no requirement for drive aisle width for angled, 75-degree parking.

   Because the majority of parking need is residential, the proposed lot is defined as a low turnover lot and can therefore support a more compact layout than a typical public parking lot. The proposed layout includes for a 75-degree angle at parking spaces, with the recommended one-way drive aisle width of 17.83'. The City's Technical Manual does not have a standard aisle width associated with a 75 degree parking space; this being the case, the parking lot layout was designed using criteria published by Carl Walker, Inc., an engineering firm that specializes in parking structure design. With this being the case, the applicant is requesting this flexibility in the form of a waiver for a 17.83'-wide one-way drive aisle width.

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Att. 24

From: William Savage <wsavage@acorn-engineering.com>
To: "Shukria Wiar (shukriaw@portlandmaine.gov)" <shukriaw@portlandmaine.gov>, 'Dave Senus' <dsenus@woodardcurran.com>, "'David Margolis-Pineo(DMP@portlandmaine.gov)'" <DMP@portlandmaine.gov>
CC: "Marieke Sparrow-Pepin (msparrow-pepin@pcconstruction.com)" <msparrow-pepin@pcconstruction.com>, "Jonathan Culley(jonathan@redfernproperties.com)" <jonathan@redfernproperties.com>, 'Catherine Culley' <catherine@redfernproperties.com>, Michael Guethle <mguethle@acorn-engineering.com>, Olivia Dawson <odawson@acorn-engineering.com>
Date: 10/13/2015 2:20 PM
Subject: 667 Congress - Wall Anchor
Attachments: 667 Congress - Soil Nail Information.pdf; SOE - Layout.pdf

Shukria,

PC Construction has proposed to use wall anchors to secure the basement walls during construction. Below is a quick summary of wall anchors (also referred to as soil nails) from PC Construction:

* The soil nails would be installed per the proposed/attached plan (SOE - Layout) around the south end of site.

* The system provides temporary shoring until the structure is built, but will remain in place after project completion. Future utility work can excavate through the no longer necessary soil anchor. (This would be recorded within the Plat).

* Soil nails are installed 4-5' O.C. and can be adjusted to accommodate existing or future conditions.

* There will be 2-3 layers of soil nails pending the location of existing rock, the soil nails are installed in five foot lifts.

* The first layer of soil nails typically starts 2-3 feet down from the ground surface.

* The soil nails are typically installed at 15 degrees from horizontal grade and can have a maximum angle of 30 degree if required to accommodate existing or future conditions.

* The soil nails will extend 12-15 feet from the face of the basement foundation walls.

* Utility verification and standard operating procedure for utility conflicts: If a utility is discovered on site that has not been previously identified, the subcontractor will coordinate with PC and the sitework subcontractor to ascertain the exact location of the utility, and will verify that the soil nails will miss the utilities in accordance with the utility policy/diagram attached.

* The design of the support of excavation system will be designed and stamped by a Professional Engineer of the State of Maine.

* Easement precedents and local examples: Soil anchors are routinely used in Boston. A similar temporary soil nail system was installed at Maine Medical Center along Charles St. along with permanent micropiles.

Please note the attached drawings are not specific to the 667 Congress St project and are for reference only.

1. Soil Nail Detail Sketch

2. Utility Clearance Diagram

3. Soil Nailing Excavation Support Procedure

It's my understanding David Margolis-Pineo is on vacation this week. Given the technical aspect I have cc'd Dave Senus. I would be happy to hold a conference call or meet with you to answer any questions or concerns you may have so that the City is comfortable with our approach with a technology that is routinely applied in the urban environment.

Best,

Will Savage, PE
Principal

Licensed in Maine

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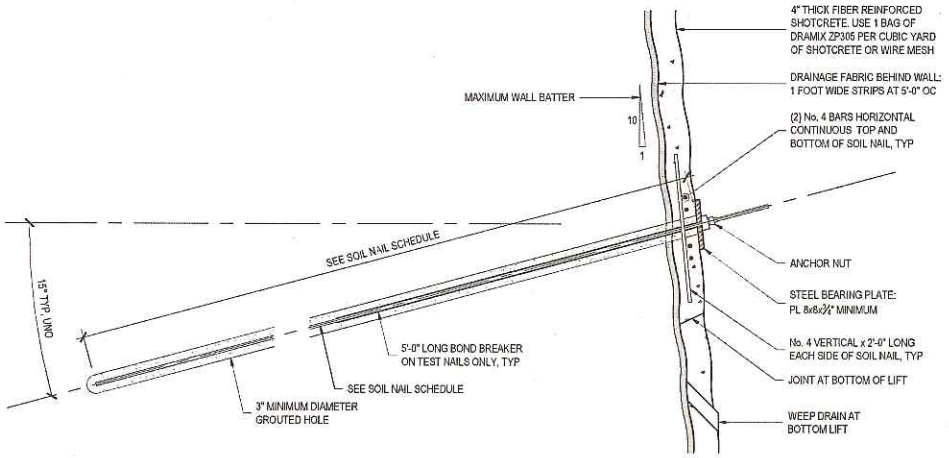
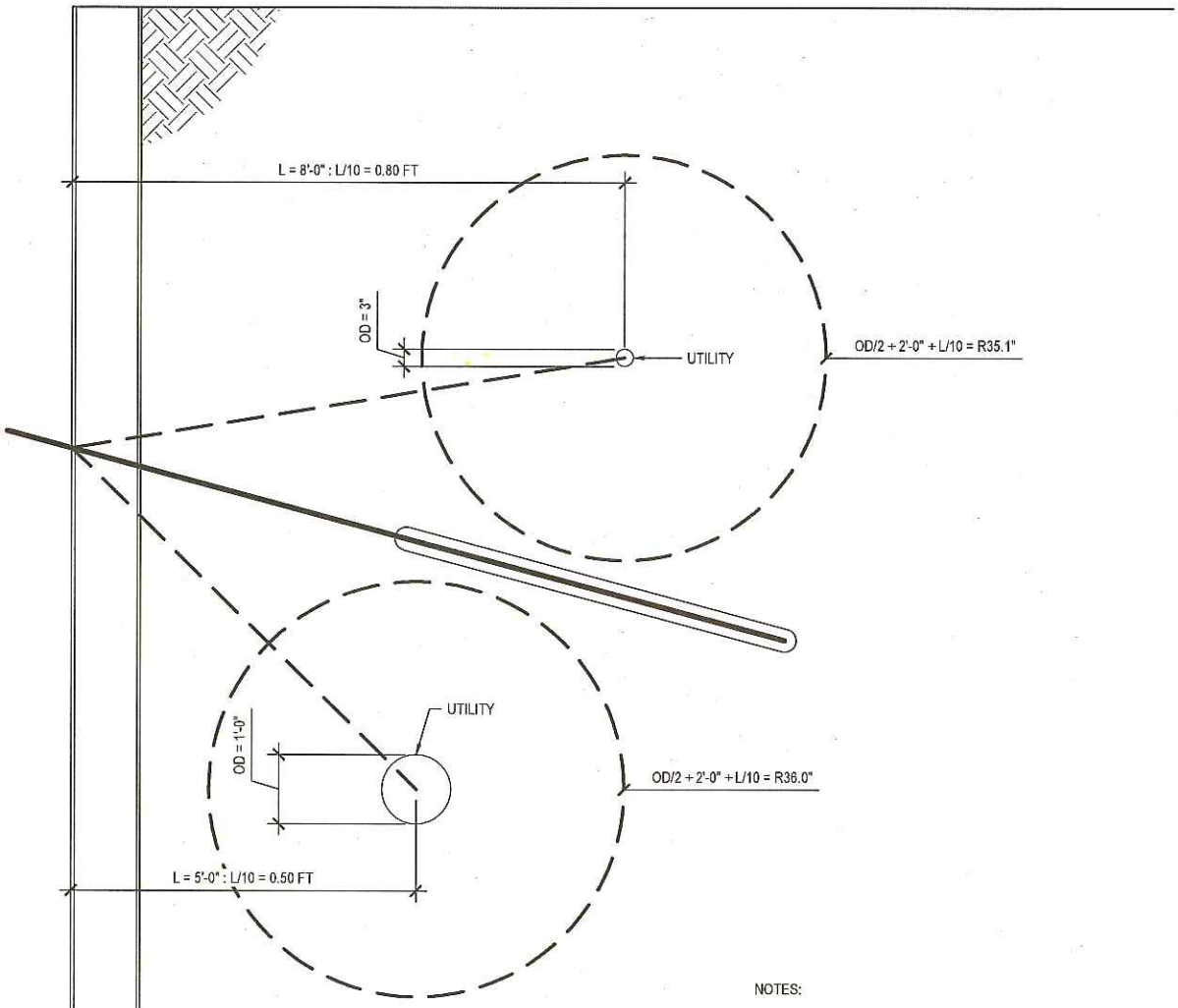
C. 207.317.1884

Att. 24a



1	SOIL NAIL DETAIL
	SCALE: 3/4" = 1'-0"



NOTES:

1. IN GENERAL, A RADIUS OF CLEARANCE SHOULD BE MAINTAINED AROUND THE UTILITY.
2. THIS RADIUS CONSIST OF THE SUM OF THE FOLLOWING
   - 2.1. HALF OF THE OUTSIDE DIAMETER (OD)
   - 2.2. 2'-0" GENERAL CLEARANCE TO AVOID UTILITY DISTURBANCE.
   - 2.3. AN ADDITIONAL 1'-0" PER 10'-0" OF HORIZONTAL DISTANCE, L, FROM THE FACE OF WALL TO THE UTILITY (L/10).
3. THEREFORE, R = OD/2 + 2'-0" + L/10

SOIL NAILING EXCAVATION SUPPORT PROCEDURE:

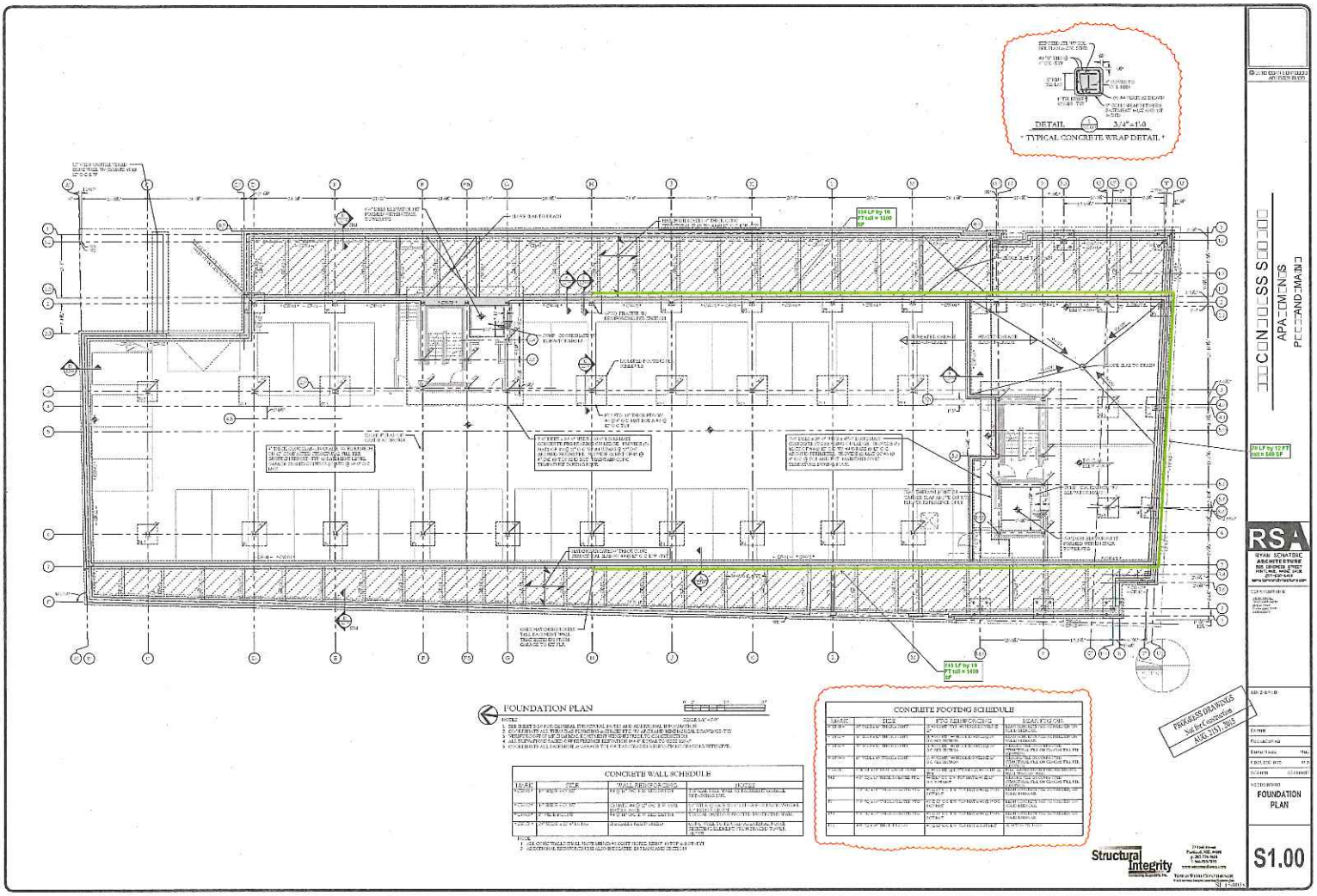
1. EXCAVATE SITE TO TOP OF SOIL NAIL WALL ELEVATION, SLOPING SOIL AS REQUIRED (BY OTHERS). PROVIDE SLOPING AND/OR TRENCHING AT TOP OF WALL TO DIVERT SURFACE WATER RUN-OFF (BY OTHERS).

2. IF REQUIRED, REVISE SOIL NAIL LOCATIONS OR ANGLES TO MISS UTILITIES.

3. EXCAVATE TO A MAXIMUM OF 5-FOOT HIGH (10V:1H) LIFT (BY OTHERS). IF THE EXCAVATION FACE WILL NOT STAND AT REQUIRED INCLINATION, REDUCE THE LIFT HEIGHT OR SLOT THE EXCAVATION AT THE DIRECTION OF SFC'S SUPERINTENDENT. SLOTTING THE EXCAVATION IS ACCOMPLISHED BY EXCAVATING THE FACE IN ALTERNATING 8 TO 10 FOOT WIDE SEGMENTS TO BUTTRESS THE SOIL. AFTER THE SLOTS ARE SOIL NAILED, THE SOIL BERM IS EXCAVATED AND THE FACE OF THE EXCAVATION BETWEEN THE SLOTS IS SOIL NAILED. MAINTAIN A THIRTY (30) FOOT WIDE (MINIMUM) FIRM, DRY, LEVEL BENCH AT EACH WORKING ELEVATION.

4. INSTALL DRAINAGE STRIPS , VERTICAL REINFORCEMENT AND HORIZONTAL REINFORCEMENT PRIOR TO PLACEMENT OF SHOTCRETE. INSTALL WEEP DRAINS AFTER PLACEMENT OF SHOTCRETE

Att. 24b


DETAIL 3/4"=1'-0
* TYPICAL CONCRETE WRAP DETAIL *
FOUNDATION PLAN
CONCRETE WALL SCHEDULE
CONCRETE FOOTING SCHEDULE
PROGRESS DRAWINGS
Not For Construction
AUG 25TH, 2015
FOUNDATION PLAN
S1.00

667 Congress Street Landscaping

CONSTRUCTION

Job #: 15015
Project Size: 650 SF
Detail - With Taxes and Insurance ,Indirect Costs are Spread

Estimator: T. Riordan, J. Picoraro, M. Tanis
Group 1: Major ItemCode Groups

Item Code	Description	Quantity	UM	Total UnitCost	Total Cost
02 - SITEWORK					
2600.055	Proofroll Subgrade - Stone Paving	53	SY	0.64	34
2610.130	Install Base (L) - Stone Paving	12	CY	55.46	682
2610.134	Base - Granular Aggregate Base (M) - Stone Paving	12	CY	28.98	356
2610.200	Install Stone Paving (L)	6	CY	68.93	424
2610.206	Crushed Stone (M) - Paving	6	CY	28.98	178
2700.117	Grading for Curbs	70	LF	17.72	1,240
2700.118	Granite Curbs	70	LF	54.94	3,846
2700.119	Granite Edging	260	LF	65.93	17,141
2700.120	Mulch/Topsoil of of Planting Areas	10	CY	256.71	2,567
2710.121	Pine Shrubs (L)	7	EA	346.91	2,428
2710.122	Pine Shrubs (M)	7	EA	173.89	1,217
2710.200	Vertical Growth Plantings (L)	40	EA	60.64	2,426
2710.201	Vertical Growth Plantings (M)	40	EA	28.98	1,159
2710.239	Plantings - 12' - 16' Maple Tree (L)	3	EA	808.55	2,426
2710.240	Plantings - 12' - 16' Maple Tree (M)	3	EA	2,898.09	8,694
2710.280	Greenscreen Assemblies	594	SF	76.92	45,688
2710.285	Landscaping Back of Building **ALLOWANCE **	1	LS	5,494.02	5,494
*** Total 02 - SITEWORK**		**650**	**SF**	**147.69**	**96,000**
Total Estimate					**96,000**

Shukria Wiar - 667 Congress Street - Planning Board motions

From: "Jonathan Culley" <jonathan@redfernproperties.com>
To: "Shukria Wiar" <SHUKRIAW@portlandmaine.gov>, "Barbara Barhydt" <BAB@port...
Date: 10/26/2015 10:59 AM
Subject: 667 Congress Street - Planning Board motions
CC: <sgo@portlandmaine.gov>, "Will Savage" <wsavage@acorn-engineering.com>, ...

Shukria, Barbara,
I have reviewed the Planning Board report and proposed motions. We are generally in agreement, but I bring up three points that I believe should be discussed and/or clarified prior to tomorrow's Pb meeting.

1. **Waiver 3: Tree Fund:** Our position remains that we are prepared to execute the landscape improvements that Jeff Tarling has recommended or pay into the Tree Fund, but not both. We believe that asking us to do both imposes an unfair penalty that does not reflect the intent of the Ordinance. As we have demonstrated, our planned Landscape Improvements are of far greater value than the proposed Tree Fund contribution.
2. **Waiver 4 and 5:** Our reading of Chapter 14-498 (b) is that this standard is not applicable to this project. This ordinance seems to refer to newly constructed roads and not new urban buildings. This is the first time that this standard has been applied to one of our urban infill projects. We believe that it is atypical for Developers to be asked to work on sidewalks on opposite sides of the street. As I have indicated in several meetings, we are willing to make a reasonable contribution toward improvements to the Sidewalk across Avon St. (we are already moving the Utility poles underground at our expense). We are not willing to excavate the existing sidewalk and rebuild. This would put us in an untenable situation working with the owner of the Trelawney Building, who is known to be extremely difficult.
3. **Site Plan Condition 1.d.:** At the Planning Board workshop, we spoke at length with the Board about Parking and there was specific discussion about the lack of market rate buildings in our parking study. The Board agreed that there were not good subjects for a study of market rate buildings. I was surprised to see this as a Condition given how clearly the Board spoke at the Workshop. I know that Mr. Errico was not at the PB Workshop and the probably explains why this request was not struck from his earlier comments. We believe that this Condition should be removed.

We look forward to hearing back from you today on these issues. I would be happy to talk on the phone or come down to City Hall for a short meeting if it makes sense. Thanks!

Jonathan Culley
Redfern Properties LLC
cell: 207.776.9715
jonathan@redfernproperties.com
www.redernproperties.com

REVISED PROPOSED MOTIONS FOR 667 CONGRESS STREET

WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations, contained in the Planning Board Report for the proposed subdivision and site plan (application 2015-093), including but not limited to the report and the staff reviews relevant to Portland's Technical and Design Standards and other regulations, as well as the Planning Board deliberations and the testimony presented at the Planning Board hearing.

4-0 (Jack, Bill absent)

1. The Planning Board (**waives/does not waive**) Technical Design Standard Section 1.14 *Parking Lot and Parking Space Design* to allow 26 compact parking spaces, exceeding the required 20% compact spaces allowed.

2. The Planning Board (**waives/does not waive**) Technical Design Standard Section 1.7.2.3 *Minimum Driveway Width (two-way)* to allow the driveway access to Avon Street to be 18 feet instead of the required minimum width of 20 feet for two-way ingress and egress.

3. The Planning Board (**finds/does not find**) that the applicant has demonstrated that site constraints prevent the planting of required street trees along Congress and Avon Streets and Vernon Place, thus the Planning Board (**waives/does not waive**) Section 14-526 (b) (2) (b) (iii) *Street Trees* [to allow for a contribution of $27,200 to the City's Street Tree Fund to be substituted for the provision of on-site street trees] ~~**OR** [to waive a portion of the street tree contribution under the General Waiver criteria due to the applicant's improvements for granite tree wells and granite edging.]~~ at $17,200

4. Sidewalk Waiver for Avon Street:
   The Planning Board [**waives / does not waive**] with regard to Avon Street as specified in Zoning Ordinance, Section 14-498 (b) (8) (a and b), ~~which requires that sidewalks and curbing shall be constructed on each side of each street in accordance with article III of chapter 25 and curbs shall be constructed on each side of each street~~, to allow no sidewalk on the side of the proposed building, subject to the condition that the applicant shall be responsible for providing a fully ADA compliant sidewalk on the opposite side of Avon Street meeting the City of Portland's material policy requirements. The final design of Avon Street shall require a final approval by the Department of Public Services as it relates to maintenance activities. The curbing shall be constructed as provided in article VI of chapter 25.

5. Sidewalk and Cubing for Vernon Place:
   The Planning Board [**waives / does not waive**] with regard to Vernon Place as specified in Zoning Ordinance, Section 14-498 (b) (8) (a and b), which requires that sidewalks and curbing shall be constructed on each side of each street in accordance with article III of chapter 25 and curbs shall be constructed on each side of each street, to allow sidewalk and curbing to the garage opening on Vernon Place and no sidewalk beyond that point. The curbing shall be constructed as provided in article VI of chapter 25.

Subdivision Plat

On the basis of the application, plans, reports, and other information submitted by the applicant, findings and recommendations contained in Planning Board Report for application 2015-093 relevant to the Subdivision Ordinance, and other regulations, as well as the Planning Board deliberations and the testimony presented at the Planning Board hearings, the Planning Board finds the following:

That the plan (**is/is not**) in conformance with the subdivision standards of the land use code,

subject to the following conditions:

1. The final boundary survey, subdivision plat, and site plans shall be stamped by a registered professional land surveyor and registered engineer;

4-0

2. The Subdivision Plat shall be finalized to the satisfaction of the Planning Authority, Department of Public Services and Corporation Counsel;

3. That the following shall be finalized to the satisfaction of the Corporation Counsel prior to the issuance of a Certificate of Occupancy:
   a. Sidewalk Easement
   b. Drainage Easement
   c. Roadway Easement
   d. Building Wall Anchor Irrevocable License
   e. Stormwater management agreement

4. The recording plat shall be revised noting all waivers and conditions for review and approval by the Planning Authority prior to recording. All waivers shall be recorded within 90 days of the Planning Board approval.

5. The City Surveyor comments dated 10.21.2015, as stated below and marked up on the plat, shall be addressed prior to the issuance of a building permit:
   a. Drainage easements. Need to define who will own and be responsible for them.
   b. The existing 10 foot wide Storm Drain Easement from Vernon Place to Avon Street will need to be discontinued by City Council as the City will not be responsible for a storm drain or sewer which runs under a building.
   c. Need to add note to subdivision plan that the City will not be responsible for the catch basin in Vernon Place and the storm drain which runs under the building.

Level III Site Plan

On the basis of the application, plans, reports, and other information submitted by the applicant, findings and recommendations contained in Planning Board Report for application 2015-093 relevant to the Site Plan Ordinance, and other regulations, as well as the Planning Board deliberations and the testimony presented at the Planning Board hearings, the Planning Board finds the following:

4-0

That the plan **(meets/does not meet)** the parking requirements of the zoning ordinance with the provision of 81 on-site vehicle parking spaces; and

That the plan **(is/is not)** in conformance with the site plan standards and all other applicable provisions of the land use code, and subject to the following conditions:

1. The Consultant Traffic Engineer comments dated 10.22.2015, as stated below, shall be submitted for review and approval prior to the issuance of a building permit:
   a. Cross-section details of the streets be provided for Vernon Place and Avon Street
   b. Final approval by DPS as it relates to the on-going city maintenance operations.
   c. Cross-slope and grade details will be required for the ADA ramps being proposed on Congress Street.
   d. Eliminate the crosswalk on Avon Street.

2. Traffic Demand Management Plan shall include a provision that strategies be adjusted, as necessary, to address parking demand conditions. As part of this requirement, the applicant shall conduct a parking survey, with methods approved by the City, at initial full occupancy and annually thereafter.

3. The Deputy City Engineer comments dated 10.22.2015, as stated below, shall be addressed prior to the issuance of a building permit:
    a. Sewer evaluation: City crews have inspected a reach of sewer on Avon Street down stream of where the applicant wishes to connect their sanitary lateral. This sewer evaluation has not been received by Department of Public Services (DPS). DPS requests that if that reach of sewer is in need of replacement, the applicant shall be responsible to do so.
    b. The applicant shall be required to install vertical granite curbing along the property line with a seven inch reveal on Avon Street.
    c. There is concern that the existing sanitary sewer on Vernon Place, scheduled to be abandoned by the applicant, may still be active. The applicant is request to verify to the City's wastewater group satisfaction that is line is in fact 100% abandoned.

4. The City Arborist comments dated 10.22.2015, as stated below, shall be addressed prior to the issuance of a building permit:
    a. The applicant shall create a more robust planting of green wall plants and a review of 'best plant' options to cover the wall.

5. The Consultant Stormwater Engineer comments, dated 10.21.2015, shall be addressed prior to the issuance of a building permit.

6. The ramps at the corner of Congress Street shall meet the Historic District detail Figure I-7A in the Technical Standards.

7. The bicycle hitch shall meet the Technical Standards in regard to mounting and color.

8. The developer/contractor/subcontractor must comply with conditions of the construction stormwater management plan and sediment and erosion control plan based on City standards and state guidelines. The owner/operator of the approved stormwater management system and all assigns shall comply with the conditions of Chapter 32 Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements. A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form with any changes to be approved by Corporation Counsel, shall be submitted, signed, and recorded prior to the issuance of a building permit with a copy to the Department of Public Services.

9. That all HVAC systems and external mechanical equipment shall meet the maximum allowable noise requirements of the zone; each unit shall submit documentation of dBA output to confirm compliance of both the unit and the building in respect of rated noise levels and cumulative noise levels, to the satisfaction of the Zoning Administrator prior to the issuance of a Building Permit for that unit.

10. The applicant shall submit revised lighting and photometric plan for review and approval by the Planning Authority prior to the issuance of a building permit.

667 Congress Street Landscaping

CONSTRUCTION

Job #: 15015
Project Size: 650 SF
Detail - With Taxes and Insurance ,Indirect Costs are Spread

Estimator: T. Riordan, J. Picoraro, M. Tanis
Group 1: Major ItemCode Groups

Item Code	Description	Quantity	UM	Total UnitCost	Total Cost	
02 - SITEWORK						
2600.055	Proofroll Subgrade - Stone Paving	53	SY	0.64	34	
2610.130	Install Base (L) - Stone Paving	12	CY	55.46	682	
2610.134	Base - Granular Aggregate Base (M) - Stone Paving	12	CY	28.98	356	
2610.200	Install Stone Paving (L)	6	CY	68.93	424	
2610.206	Crushed Stone (M) - Paving	6	CY	28.98	178	
2700.117	Grading for Curbs	70	LF	17.72	1,240	
2700.118	Granite Curbs	70	LF	54.94	3,846	
2700.119	Granite Edging	260	LF	65.93	17,141	
2700.120	Mulch/Topsoil of of Planting Areas	10	CY	256.71	2,567	
2710.121	Pine Shrubs (L)	7	EA	346.91	2,428	
2710.122	Pine Shrubs (M)	7	EA	173.89	1,217	
2710.200	Vertical Growth Plantings (L)	40	EA	60.64	2,426	
2710.201	Vertical Growth Plantings (M)	40	EA	28.98	1,159	
2710.239	Plantings - 12' - 16' Maple Tree (L)	3	EA	808.55	2,426	
2710.240	Plantings - 12' - 16' Maple Tree (M)	3	EA	2,898.09	8,694	
2710.280	Greenscreen Assemblies	594	SF	76.92	45,688	
2710.285	Landscaping Back of Building **ALLOWANCE **	1	LS	5,494.02	5,494	
*** Total 02 - SITEWORK**		**650**	**SF**	**147.69**	**96,000**	
Total Estimate					**96,000**	

City of Portland Ordinances
REQUIREMENTS FOR CONSTRUCTION OF SIDEWALKS AND CURBING

Sec. 25-96. Required for nonresidential, two-family or multi-family development; exceptions.

Where a nonresidential, or two-family or multi-family development requiring site plan approval abuts any accepted street and a sidewalk with granite curbing satisfactory to the public works authority has not already been provided, a sidewalk constructed of bituminous concrete, portland cement concrete, brick or other paving material and granite curbing shall be provided along the entire street frontage of the lot. If either a sidewalk or curbing, but not both, shall exist at such location which is satisfactory to the public works authority, only a sidewalk or curbing, as the case may be, shall be provided. In either case, such sidewalk and curbing shall be constructed in accordance with the specifications and to the satisfaction of the public works authority at no cost to the city. In conjunction with major site plan review, the planning board, or with minor site plan review, the planning authority, may waive or modify the requirements contained herein upon a like finding and on the same terms and conditions as set forth in section 14-506(b) of this Code.

Sec.14 –506 (b) Modifications.

(b) Where the planning board or planning authority finds that, for each of the requirements listed below, two or more of the conditions exist with respect to compliance with the requirements set forth in sections 14-498 and 14-499 pertaining to the provision and construction of curbs and/or sidewalks, it may vary the regulations so that substantial justice may be done and the public interest secured:

Sidewalks-

1. There is no reasonable expectation for pedestrian usage coming from, going to and traversing the site.
2. There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does no contribute to the development of a pedestrian oriented infrastructure.
3. A safe alternative-walking route is reasonably available, for example, by way of a sidewalk on the other side of the street.
4. The street is scheduled for major reconstruction as a component of the Capital Improvement Program.
5. The street has been constructed or reconstructed without sidewalks within the last 24 months.
6. Strict adherence to the curb and sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.

Curbing-

1. The cost to construct the curbing, including any applicable street opening fees, is in excess of 5% of the overall project cost
2. The street is scheduled for major reconstruction as a component of the Capital Improvement Program.
3. The street has been rehabilitated without curbing in the last 60 months.
4. Strict adherence to the curb and sidewalk requirement would result in the loss of significant site features related to landscaping or topography that are deemed to be of a greater public value.
5. Runoff from the development site or within the street does not require curbing for stormwater management.

IN NO EVENT SHALL THE VARIATION HAVE THE EFFECT OF CREATING POTENTIALLY HAZARDOUS VEHICLE AND PEDESTRIAN CONFLICT OR NULLIFYING THE INTENT AND PURPOSE AND POLICIES OF THE LAND DEVELOPMENT PLAN RELATING TO TRANSPORTATION AND PEDESTRIAN INFRASTRUCTURE AND THE REGULATIONS OF THIS ARTICLE. AT ITS DISCRETION, THE PLANNING AUTHORITY MAY REFER ANY PETITION FOR A VARIANCE FROM THE CURB AND SIDEWALK REQUIREMENT TO THE PLANNING BOARD FOR DECISION.

667 Congress Street
Neighborhood Meeting Certification

I, Jonathan Culley of Redfern Properties LLC hereby certify that a neighborhood meeting was held on April 8, 2015 at the Reiche Community Room, 166 Brackett St., Portland at 6:00pm.

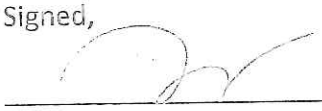
I also certify that on March 25, 2015, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.

2. Residents on the "interested parties" list.

3. A digital copy of the notice was also provided to Jennifer Yeaton of the Planning Division at jmy@portlandmaine.gov , and Shukria Wiar, the assigned planner, to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,



4/10/2015

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

redfern properties

P.O. Box 8816
Portland, ME 04104
Office: 207-221-5746
Fax: 207-221-2822
www.redfernproperties.com

March 25, 2015

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a new development at 665-667 Congress St. in Portland, the site of Joe's Super Variety. The project consists of ground floor commercial space, which will be the new home of Joe's Super Variety and roughly 130 residential rental apartments on Floors 2-8. This meeting pertains to our Zoning Map Amendment Application. Currently the property is Zoned B-3 in the front and R-6 in the rear. We are requesting a Zone Map Amendment which would change the back of the property to the B-3 Zone to match the Zoning at the front of the property.

Meeting Location:	Reiche School Community Room, 166 Brackett St., Portland
Meeting Date:	Wednesday, April 8th
Meeting Time:	6:00pm

The City Code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

If you have any questions, please contact me at 207-221-5746 or jonathan@redfernproperties.com. I hope to see you at the meeting.

Sincerely,

Jonathan Culley
Redfern Properties LLC

Sign-In Sheet

667 Congress St. Proposed Development

Neighborhood Meeting Related to Zone Map Amendment

April 8, 2015 @ 6pm — Reiche Community Room, Portland

Name	Address	Email (Optional)
Michael Dixon	20 Bancroft	MTD32@msn.com
Phyllis Rogers	16 Pine St.	
Elizabeth Kelly	16 Sherman St.	
Lawrence Kelly	"	
Sue Goldsmith	46 [illegible]	
Eileen Monahan	29 Deering St	
Penny Pollard	99 Deering St	
Pat O'Donnell	442 Cumberland Ave	
Karen [illegible]	462 Cumberland	[illegible]
Randy May	462 Cumberland	
Tiffany Kist	15 Avon St.	
[illegible]		
Steve DiMuccio	207 State St	
Todd Alexander	3 Carroll St	
Zack Barowitz	[illegible] Bradley St	
Lauren Church	236 Brackett St	

Sign-In Sheet

667 Congress St. Proposed Development

Neighborhood Meeting Related to Zone Map Amendment

April 8, 2015 @ 6pm — **Reiche Community Room, Portland**

Name	Address	Email (Optional)
Steven Schaaf	52 High St	SCSMedia@aol.com
Michel P. Michaud	129 Pine St.	
Ed Gardner	149 Western Prom	
[illegible]	11 Walker St	camchale13@gmail
Pamela Chase	198 Danforth St.	
Bill Dowkas	145 State St.	wdowkas@gmail.com
Rosanne Graef	30 Salem St.	rgraef@gwi.net
[illegible]	3 Quest St	

Sign-In Sheet

667 Congress St. Proposed Development

Neighborhood Meeting Related to Zone Map Amendment

April 8, 2015 @ 6pm — Reiche Community Room, Portland

Name	Address	Email (Optional)
Liz Parsons	Winter St.	ecparsons33@hotmail.com
Andrea Zimble	46 Deering Street	azimble@gmail.com
Penny Stone		
Dick Stone		
JEN DEFILIPP	119 Winter	JenD@TOWNSENDRE.com

667 Congress Street

Neighborhood Meeting – Zoning Map Amendment Application

Meeting held April, 2015, 6pm at Reiche Community Room, 178 Washington Ave, Portland

Meeting Minutes:

Please note that minutes are not verbatim, but we have made our best efforts to reflect meaning and intent.

The meeting began at 6:02pm. Jonathan Culley, principal of Redfern Properties introduced himself and Ryan Senatore, of Ryan Senatore Architecture. He also introduced Michael Discatio and David Discatio, two of the owner's of Joe's Super Variety and of the 667 Congress Property. Culley explained that the Discatios would continue to be Owners in the new development and that Joe's Super Variety would continue at the location as a long-term tenant. Jonathan Culley provided background on Redfern Properties, which has been developing real estate in Portland since 2005. Culley emphasized that Redfern is local, with its office in Portland. He described current projects Munjoy Heights and West End Place, and explained Redfern's core values of progressive, super energy-efficient infill developments. Culley explained Redfern's belief in 'Smart-Growth' planning models; that infill development and increasing urban density benefits our environment as well as our cultural institutions; that reversing 'suburban sprawl' is good for our society.

Culley explained City of Portland's regulatory process; that this evening's meeting is related to the Zoning Map Amendment Application and that if the Zone change is approved there will be a Site Plan review which is a more detailed process focusing on the more technical aspects of the project such as traffic, parking, stormwater, architectural design, landscaping, etc. Culley also discussed the Historic Preservation District and the related approval process. He indicated that Redfern was expecting an initial Historic Preservation Board meeting on May 6th. He described the desired schedule for the approval process which was targeting construction starting in late 2015.

Culley discussed the specific Zoning on the site, showing a Zoning map with the existing and requested zoning. He explained why Redfern needed the entire property zoned B-3, why the split zoning currently on the property would not work. Culley showed a map of the neighborhood showing the pattern of 6+ story apartment buildings on the same block.

Ryan Senatore presented a preliminary rendering of the building and discussed some of the historical and architectural context that led us to this design.

The presentation was concluded and the floor was opened for questions and comments. Questions and comments are in bold:

Q. What are the permitted uses in B-3? In R-6?

Culley described the permitted uses as well as setbacks, density requirements, and height limits in each of B-3 and R-6, explaining that additional height and residential density were the drivers of needing a zone change.

Q. Why is apartment entrance on the left side of the building?

Ryan Senatore explained the desire to connect the building to Longfellow Square and that the residential entrance was a 'gesture' to the Square.

Q. Why is the ground floor not all 'storefront' glazing?

Ryan explained that it was storefront in 'punched openings' and that the sill height was dictated by the store's requirements. Most of the ground floor will be Joe's Super Variety.

Q. What is the façade material on the south side?

Ryan explained that it would be brick closest to Congress St. and then either metal or composite panel toward the back.

Q. Do you have any drawings of the side facing Deering St.?

Culley indicated that we don't have those renderings yet but that we are planning to go before the Historic Preservation Board on May 6th and would have a complete package of renderings by then.

Q. Where is the parking?

Culley explained the parking concept whereby there would be two levels of parking, one in a basement accessed on Avon St and an upper level of structured parking accessed from Vernon PL. Total parking spaces were expected to be about 120.

Comment: Both Avon and Vernon Streets are very narrow.

Culley indicated that this issue would be addressed during Site Plan review.

Q. How many units and how much parking?

Culley indicated the plan for 132 units and 120 parking spaces. The parking would be on 2 levels.

Comment: That seems like a good ratio between units and parking.

Comment: I live on Pine St. between State and Winter. There is not enough parking and the impact on the neighborhood will be significant. Where I am going to get people to park?

Culley once again addressed the balance between parking and housing and offered that some of the most progressive planning models were suggesting that less parking may be optimal.

Q. What is the unit mix?

Culley indicated 35 studios, 79 one-bedrooms, and the remainder 22 two-bedrooms. The apartments would be all market-rate. Utilities would not be included. Culley explained some of the energy efficiency practices intended for the building.

Q. Why not a contract zone?

Culley: The City is not particularly interested in giving contract zones, they would rather give the right zoning for a parcel or area, so asking for this Zone change is the most efficient path forward. Culley acknowledged why contract zones may be more appealing to the neighbors, but assured that Redfern has a track record of building the projects it proposes.

Q: Will there be rentable parking spaces?

After the Discatio's and our apartment renters are offered a space, any additional spaces would be offered to neighbors.

Q: How many stories is the building?

The building is 8-stories. However, we are not going to the rear property line.

Q. The parking garage will go to the property line but the rest of the building won't?

That is correct.

Q. Has this property always been this size and why are there two zones?

We don't know why the Zoning cuts across the property. It is not completely unusual, but we think it makes great sense to have the property in a single zone.

Q. Is Joe's going to be a variety store?

David Discatio indicated that the store is very excited about this new project and they have been operating for 50 years as a variety store, rather than a Smoke Shop.

Q. How long will the store be shut down?

We are working through this but want to minimize the duration of the store closure.

Q. Is there any open space on the property?

There is no public open space on the property. This is no atypical of an urban environment.

Q. What will be the maximum residency?

Culley indicated that there were 132 apartments, and that he could not predict exactly how many people would live in the building but expected a small average household size. Culley estimated 200 people.

Q. What is the size of the units?

Culley answered roughly 950sf for 2 bedrooms, 670sf for 1 bedrooms, and 450sf for studios.

Q. What will the rents be?

Culley indicated that rents were not set, but suggested $1,000-1,100 per month for studios, $1,400-1,500 for one bedrooms and $1,800-1,900 for two bedrooms.

Comment: I live on that block and I want to bring up some safety concerns. There is a lot of stuff that happens on that sidewalk.

Culley explained that there would be some security measures such as video cameras, on-site management and that the garages would be 100% secure. Also, more people living in the neighborhood usually brings more security.

Q. Will interior units allow for aging in place?

Culley responded that there will be ADA units. He pointed out that at Redfern's West End Place building there is a mix of tenants including older people.

Ryan Senatore indicated that the building would comply with the Fair Housing Act, which would allow for certain corridor widths and accessibility.

Q. Are you going to have on site staff?

Culley responded that there was not yet a management plan in place, but that he expected a full-time staff person would be present during working hours.

Q. Who are the owners of the project?

Culley: Redfern Properties, along with the Discatio family and likely one or two additional equity investors. We will all be local, no out-of-state investors. Redfern will be the managing partner.

Q. How many commercial spaces will there be?

Culley: Just one commercial space for Joe's Super Variety.

Q. Are these market rate apartments?

Culley: Yes, we intend for these all to be market rate apartments and not income restricted.

Q. Will there be any roof decks?

No, we do not plan to have a roof deck.

Q. Can you speak to your leasing activities at West End Place and how they have impacted your plans?

Culley indicated that we just began leasing at West End Place and was not ready to draw any conclusions from that activity.

Q. What other projects does Redfern have going on?

Culley described the Munjoy Heights project, the West End Place project, and the 89 Anderson Apartment, currently in the planning stage.

Q. Do you think the City Council will approve this project?

Culley explained that the City Council seems focused on encouraging new housing, so he thought the response would be favorable, but encouraged people to participate in the process to make their feelings known.

Q. When will renderings of the other sides of the building be available?

Culley and Ryan Senatore indicated that by no later than May 6th, we would be prepared to show renderings of all 4 sides. May 6th is the date of the Historic Preservation Board meeting.

Comment: I live half way down State St. I am concerned about blocking of sun.

Culley: This is certainly one of the less desirable consequences of a large project such as this. Several properties in the immediate vicinity will have less direct sunlight when this building is built. However, when we look holistically and evaluate the many benefits of this housing in this location, we think the project is well worth doing. To those who are losing some sunlight, I apologize and tell you very sincerely, that we are sympathetic to this.

Q. What is the schedule for the Planning Board.

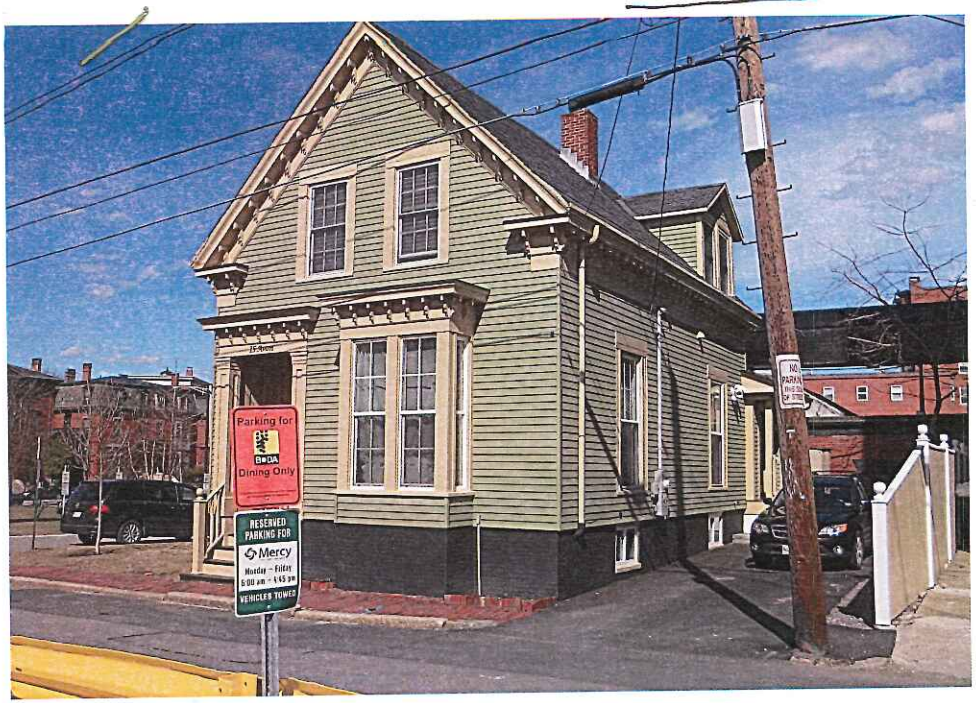
We have a workshop with the Planning Board next Tuesday night, April 14th. The Board will not take a vote at this meeting. The Workshop starts at 4:30pm and we are 2nd on the Agenda.

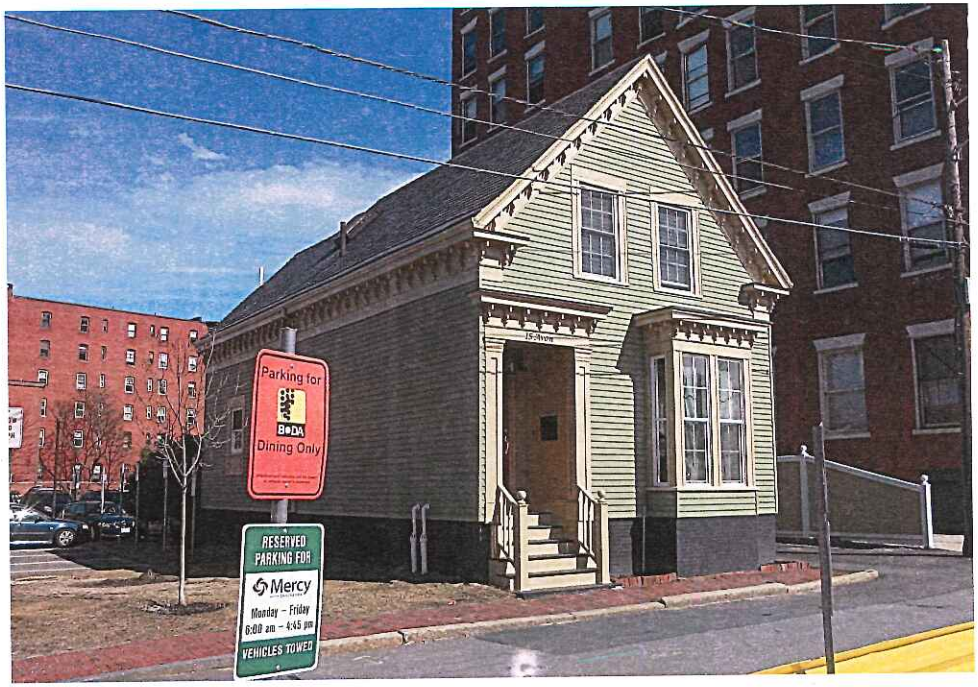
Q. What will be the Property Tax be for this property?

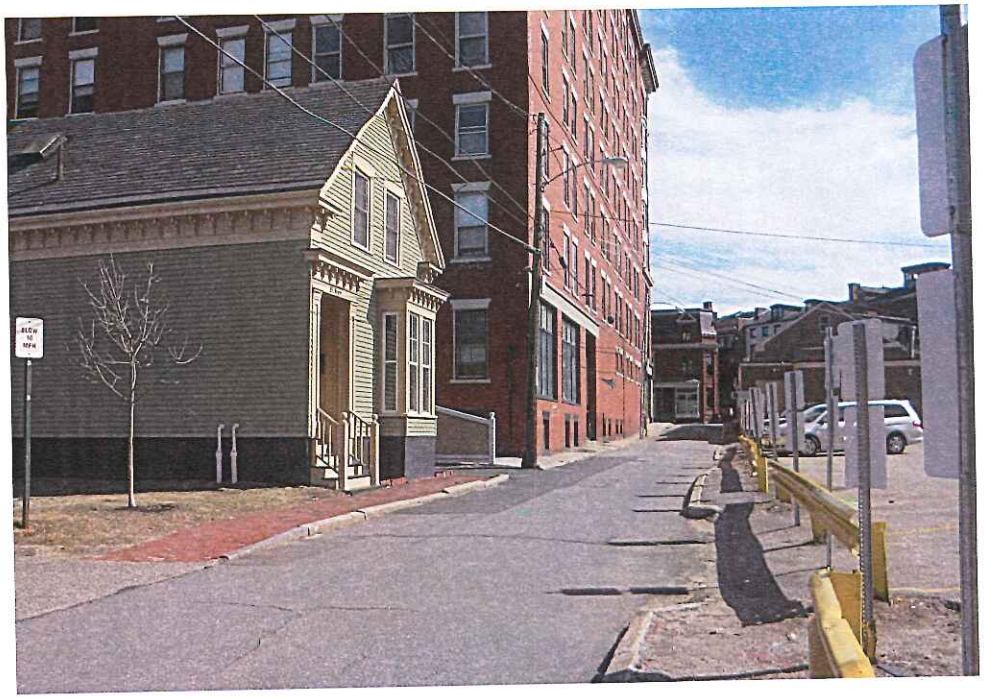
Culley estimated the Property Taxes at roughly $250,000 per year once the building is built.

The meeting was adjourned at 6:46pm.

15 Avon Street







Shukria Wiar - Fwd: Re: Question about Proposed building at 665 Congress St

From: Ann Machado
To: Shukria Wiar
Date: 4/10/2015 9:44 AM
Subject: Fwd: Re: Question about Proposed building at 665 Congress St

>>> Alex Jaegerman 4/7/2015 2:30 PM >>>
Yes, this is the correct interpretation. The accessory building components exception section applies in this case.

alex.

>>> On 4/7/2015 at 12:05 PM, in message <55240054.711 : 208 : 63676>, Ann Machado wrote:

I met with Ryan Senatore today to go over the zoning for the proposed building.

There was one section that he had a question on that I want to discuss with you. Section 14-220(h) states that within 50' of any street frontage a structure needs to be a minimum of 35' high. Bill Clark has determined that both Avon Street and Vernon Place are accepted city streets. Along Avon and Vernon, the part of the proposed building right along the street is a one story covered parking area before the building height goes up at the 15' step back. I have attached the elevation plan showing the one story of covered parking along Avon and Vernon.

The question is does section 14-220(h)(1) apply? Covered parking structures do not seem to have to meet the 35' height minimum. Thoughts?

(h) *Minimum building height:* No new construction of any building shall be less than thirty-five (35) feet in height within fifty (50) feet of any street frontage, except that this provision shall not apply to:

1. Accessory building components and structures such as truck loading docks covered parking, mechanical equipment enclosures and refrigeration units.

1. Accessory building components and sttruck

Thanks.

Ann

Introduction

- ~~On behalf of MSD Properties, LLC,~~ Jonathan Culley of Redfern Properties has submitted an application for a zoning map amendment for the property at 667 Congress Street.

- Redfern Properties is working in partnership with MSD Properties, LLC and Joe's Super Variety to redevelop the property.

- The site is divided by two different zones; the front portion along Congress Street is in the B3 zone and the rear portion is in the R6 zone.

- As part of the zone change, the applicant is proposing to extend the B3 to include the R-6 portion in the rear of the property, making the site consistent with the zoning on adjacent properties to the east and south.

- The property proposed for rezoning totals approximately 25,740 square feet with 98 feet of frontage on Congress Street. It also has frontage along Avon Street and Vernon Place. Both these streets are considered public streets.

Proposed Development:

- The applicant is seeking to amend the zoning to allow ~~for~~ mixed uses development of multifamily apartment building with Joe's Super Variety occupying the first floor along Congress Street with structures parking behind the storefront. **Plans**

- Old plans showed the first floor will also house the parking spaces (49 spaces in total) for the building uses. The remaining floors would be the rental apartments. The site would be accessed via a total of four entrances: two off of Avon Street and two off of Vernon Place. Parking, access and other aspects are conceptual at this stage.

- New Plans show 108 parking spaces on two levels (ground and basement) and 132 units on upper levels. Access will be from Vernon Place for the ground/first level and from Avon Street for the basement level.

- The parcel currently contains a surface parking lot with spaces within 35' of adjacent streets. In the B3 zone, Surface parking, whether existing or proposed, may not be located within 35' of the street, which in this case includes Vernon and Avon.

(old vs New layout) as proposed meets shemdards ~~under~~

- These spaces might be ~~considered structured parking, in which case they are allowed~~. The applicant can further explain the construction of these spaces to make this determination.

Review/Rezone

- It should be noted that the proposal includes the modification of the B-3 Downtown Height Overlay Zone to encompass the area of the proposed zone change, which would establish 85 feet as the maximum height limit. The zone change would also, in effect, extend the Downtown Entertainment Overlay Zone, which is defined by the boundaries of the B3, B3(c) and WCZ zones. The property is also in the Congress Street Historic District and will have to be reviewed by Historic Preservation Board

- A Neighborhood Meeting is required for this project and the applicant has confirmed that the neighborhood meeting was held last week on April 8th, 2015. **Minutes**

- At the time of preparing this report the Planning Division has received one written comments on Friday afternoon, please Attachment PC1. **Photos**

redfern properties

P.O. Box 8816
Portland, ME 04104
Office: 207-776-9715
Fax: 207-221-2822
www.redfernproperties.com

March 10, 2015

Ms. Barbara Barhydt
City of Portland, Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

Dear Barbara:

On behalf of MSD Properties LLC, please find attached a Zoning Map Amendment Application related to 665-667 Congress Street. Redfern Properties is working in partnership with MSD Properties LLC and Joe's Super Variety to redevelop the property with a multi-family apartment building, consisting of 7-8 stories and roughly 130 apartments. Joe's Super Variety will occupy the ground floor retail space.

Per the attached, Zoning Map, the property currently is partially in the B-3 Zone and partially in the R-6 Zone. We are requesting a Map Amendment that would designate the entire property B-3. We believe that this is a very logical change that would result in a more sensible Zoning Map. The proposed project is very consistent with the City's Comprehensive Plan and would fill the current need for rental apartment housing.

Please find attached the following in support of this application:

1. **Zoning Map Amendment Application Form**
2. **Copy of Property Deed**
3. **Vicinity Map Showing Current Zoning**
4. **Aerial Photo of City Block showing current building types**
5. **Preliminary Proposed Site Plan**
6. **Preliminary Proposed Building Rendering**

We are committed to creating a progressive and noteworthy project that will enhance this important urban neighborhood. Please do not hesitate to contact me.

Sincerely,

Jonathan Culley
Redfern Properties LLC

Zoning Map/Text Amendment Application
Portland, Maine

Planning and Urban Development Department
Planning Division and Planning Board

Portland's Planning and Urban Development Department coordinates the development review process for requests for zoning map amendments, zoning text amendments and contract or conditional re-zoning. The Division also coordinates site plan, subdivision and other applications under the City's Land Use Code. The **Application Process for a Zone Change** is summarized below under Section I and the associated costs for reviews are found under Section II, **Development Review Fees, Public Notices and Guarantees,** and are listed on the fee structure sheet.

I. APPLICATON SUBMITTAL

Pre-application meeting

Prior to submitting a zoning amendment application, the Planning Division recommends that the applicant or the designated representative schedule a pre-application meeting to discuss the review process and applicable standards for a proposal. Please contact Barbara Barhydt, Development Review Services Manager at 874-8699 to schedule a meeting.

Zoning Amendment Application

All plans and written application materials must be uploaded to a website for review. At the time of application, instructions for uploading the plans will be provided to the applicant. One paper set of the plans, written materials and application fee must be submitted to the Planning Division Office to start the review process.

- Submit one (1) complete paper set of the zoning amendment application with a concept plan and a written narrative. Contract and conditional rezoning applications must include site plans and written material that address physical development and operation of the property to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood. Applications may be submitted between 8 a.m. and 4:30 p.m. Monday through Friday at the Planning Division on the 4th floor of City Hall, 389 Congress Street, Portland.
- All applications are processed in the order in which they are received.
- In order for the Planning Division's Administrative Staff to accept and log-in an application, the application form must be complete, it shall be signed by the applicant's or the applicant's designated representative, and all applicable fees paid at the time of submittal.
- The Land Use Code is available on the City's website at www.portlandmaine.gov.
- If the application is found to be incomplete, the applicant will be informed in writing of the required plans and materials.

II. DEVELOPMENT REVIEW FEES, PUBLIC NOTICES AND GUARANTEES

Zoning Application Fees

- Each application must be submitted with the applicable fees as listed in the fee structure on page 4. The fees cover general administrative processing costs.
- Application fees may be paid in cash or by check (addressed to the City of Portland).
- An application will not be processed without the required application fees.

Fee for City Review Services

- The City of Portland charges fees for service to cover the cost of reviews by Planning and Legal staff members. The charges will be billed at an hourly rate and will be invoiced monthly for reimbursement.
- Current billing rates: Planning services, $40.00/ hour and Legal services: $75.00/hour.

Fee for Third Party Review

- Portland contracts with local engineering firms to conduct engineering reviews of development proposals. The direct cost of all engineering services or third-party consultant reviews, such as the civil engineering review of stormwater management plans, traffic impact reviews and such other reviews as required under the City's Ordinances, will be included in the monthly invoices for reimbursement.

Public Notices

- Public notices must be sent to property owners within 500 for all proposals at the time an application is received. Zoning map amendments for Industrial zones require notices to be sent to property owners within 1,000 feet.
- In advance of a Planning Board workshop or public hearing, public notices for projects must be sent to property owners and are posted in a legal ad in the Portland Press Herald and on the City's web site.
- In addition, zoning map amendments, text amendments and conditional rezoning agreements require individual notices to be posted in the Portland Press Herald.
- The Planning Division mails public notices and posts notices in the newspaper. The applicant will be billed for actual or apportioned costs for advertising and sending mailed notices.
- The applicant is required to hold a neighborhood meeting under the City's regulations for zone change requests. The mailing labels must be purchased from the Planning Division for the neighborhood meeting invitation. A request for labels requires a minimum of two business days to generate the mailing labels and a charge of $1.00 per sheet will be payable upon receipt of the labels.

Third Party Review Fees

- Engineer and Third Party Review Fees - The fees are assessed by the Consulting Engineers and Third Party Reviewers.
- Inspection Fee - This fee is 2% of the Performance Guarantee or as assessed by Planning or Public Works Engineer with $300.00 being the minimum.

Noticing/Advertisements Planning Board/City Council Review

- Legal Advertisement: Percent of total bill
- Notices: .75 cents each

(notices are sent to neighbors upon receipt of an application, workshop and public hearing meetings for Planning Board and public hearing meeting for City Council)

Planning Division	**Office Hours**
Fourth Floor, City Hall	Monday thru Friday
389 Congress Street	8:00 a.m. – 4:30 p.m.
(207) 874-8721 or 874-8719	

PROJECT ADDRESS: 667 Congress St.

CHART/BLOCK/LOT: 46-C-19-20

DESCRIPTION OF PROPOSED ZONE CHANGE AND PROJECT:

We are seeking to change the the rear half of the parcel from R-6 to B-3. The front half of the parcel is already B-3. We are proposing to build a 7-8 story multi-family apartment building with roughly 130 rental apartments and parking under and behind the building.

CONTACT INFORMATION:

	Applicant's Contact for electronic plans Name: Jonathan Culley e-mail Address jonathan@redfernproperties.com work # 207-221-5746
Applicant – must be owner, Lessee or Buyer Name: Redfern Properties LLC on behalf of MSD Properties LLC Business Name, if applicable: MSD Properties LLC Address: P.O. Box 5055 City/State : Portland, ME Zip Code: 04101	**Applicant Contact Information** Work # 207-221-5746 Home# Cell # 207-776-9715 Fax# 207-221-2822 e-mail: jonathan@redfernproperties.com
Owner – (if different from Applicant) Name: MSD Properties LLC Address: P.O. Box 5055 City/State : Portland, ME Zip Code: 04101	**Owner Contact Information** Work # Adam Taylor, Attorney 207-828-2005 Home# Cell # Fax# 207-347-4523 e-mail: ataylor@tmfattorneys.com
Agent/ Representative Name: Jonathan Culley/Redfern Properties LLC Address: P.O. Box 8816 City/State : Portland, ME Zip Code: 04104	**Agent/Representative Contact information** Work # 207-221-5746 Cell # 207-776-9715 e-mail: jonathan@redfernproperties.com
Billing Information Name: Redfern Properties LLC Address: P.O. Box 8816 City/State : Portland, ME Zip Code: 04104	**Billing Information** Work # 207-221-5746 Cell # 207-776-9715 Fax# 207-221-2822 e-mail: jonathan@redfernproperties.com
Engineer Name: Address: TBD City/State : Zip Code:	**Engineer Contact Information** Work # Cell # Fax# e-mail:

Surveyor	Surveyor Contact Information
Name: Nadeau Land Surveys Address: 918 Brighton Ave. City/State : Portland, ME Zip Code: 04103	Work # 207-878-7870 Cell # Fax# 207-878-7871 e-mail: jim@nadeaulandsurveys.com
Architect	**Architect Contact Information**
Name: Ryan Senatore Architecture Address: 565 Congress St., Suite 304 City/State : Portland, ME Zip Code: 04101	Work # 207-650-6414 Cell # 207-650-6414 Fax# e-mail: ryan@senatorearchitecture.com
Attorney	**Attorney Contact Information**
Name: Eben Adams/Pierce Atwood Address: Merrill's Wharf 254 Commercial St. City/State : Portland, ME Zip Code: 04101	Work # 207-791-1175 Cell # Fax# 207-791-1350 e-mail: eadams@pierceatwood.com

Right, Title, or Interest: Please identify the status of the applicant's right, title, or interest in the subject property:

The applicant is MSD Properties LLC. A copy of the deed demonstrating fee ownership is attached. The applicant is working in partnership with Redfern Properties LLC to rezone and redevelop the property.

Provide documentary evidence, attached to this application, of applicant's right, title, or interest in the subject property. (For example, a deed, option or contract to purchase or lease the subject property.)

Vicinity Map: Attach a map showing the subject parcel and abutting parcels, labeled as to ownership and/or current use. (Applicant may utilize the City Zoning Map or Parcel Map as a source.)

Existing Use: Describe the existing use of the subject property:

The property is currently used for retail service and parking. It is the home of Joe's Super Variety with surface parking to the rear of the store.

Current Zoning Designation(s):

The front half of the property is currently zoned B-3, while the rear half is zoned R-6. We seek Zone Map Amendment for the rear half half of the property to match the front half, such that the entire property would be zoned B-3.

Proposed Use of Property: Please describe the proposed use of the subject property. If construction or development is proposed, please describe any changes to the physical condition of the property.

MSD Properties LLC and Redfern Properties are working in conjunction to develop a multi-family apartment building with ground floor retail. Joe's Super Variety would occupy the ground floor retail space. Preliminary renderings of the proposed building are attached.

Site Plan: On a separate sheet, please provide a site plan of the property showing existing and proposed improvements, including such features as buildings, parking, driveways, walkways, landscape and property boundaries. This may be a professionally drawn plan, or a carefully drawn plan, to scale, by the applicant. (Scale to suit, range from 1" = 10' to 1' = 50'.) Contract and conditional rezoning applications may require additional site plans and written material that address physical development and operation of the property to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood.

APPLICATION FEE:

Check the type of zoning review that applies. Payment may be made in cash or check payable to the City of Portland.

Zoning Map Amendment __x__ $2,000.00 (from R-6 zone to B-3 zone)	**Fees Paid** (office use) —	The City invoices separately for the following: • Notices ($.75 each) (notices are sent to neighbors upon receipt of an application, workshop and public hearing meetings for Planning Board and public hearing meeting for City Council) • Legal Ad (% of total Ad) • Planning Review ($40.00 hour) • Legal Review ($75.00 hour) Third party review is assessed separately.
Zoning Text Amendment ___ $2,000.00 (to Section 14-_____) (For a zoning text amendment, attach on a separate sheet the exact language being proposed, including existing relevant text, in which language to be deleted is depicted as crossed out (~~example~~) and language to be added is depicted as underline (example)	—	
Combination Zoning Text Amendment and Zoning Map Amendment ___ $3,000.00	—	
Conditional or Contract Zone ___ $3,000.00 (A conditional or contract rezoning map be requested by an applicant in cases where limitations, conditions, or special assurances related to the physical development and operation of the property are needed to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood. Please refer to Division 1.5, Sections 14-60 to 62.)	—	

Signature of Applicant:	**Date:**
	3/6/15

MSD PROPERTIES LLC / MICHAEL J. DISCATIO
MANAGING MEMBER

Further Information

In the event of withdrawal of the zoning amendment application by the applicant, a refund of two-thirds of the amount of the zone change fee will be made to the applicant as long as the request is submitted to the Planning Division prior to the advertisement being submitted to the news paper.

DEED OF SALE BY PERSONAL REPRESENTATIVE
Maine Statutory Short Form

WE, LOUIS A. DISCATIO, of 18 Smith Farm Lane, Portland ME 04103, and **TERESA REO**, aka **THERESA DISCATIO**, of 99 Lowell Street, South Portland ME 04106, duly appointed and acting **PERSONAL REPRESENTATIVES of the ESTATE of JOSEPH L. DISCATIO, Cumberland Probate Docket #2012-1034**, by the power conferred by the Probate Code, and every other power, and with the right provided by decedent to convey property without notice to devisees or heirs, for consideration paid, **grant** to **MSD PROPERTIES, LLC**, a Maine Limited Liability Company with a principal place of business at 665 Congress Street, Portland ME 04101, certain lots or parcels of land and improvements in Portland, Cumberland County Maine on the northerly side of Congress Street bounded on the south by Congress Street, on the west by Vernon Place, and on the east by Avon Street, of approximately .6 acres, described on Exhibit A attached.

This property was conveyed to Joseph L. Discatio and Mary Discatio as joint tenants by warranty deed of Joseph L. Discatio dated September 16, 1990 and recorded on September 18, 1990 in Book 9322 Page 86 of the Cumberland County Registry of Deeds. Mary Discatio died on July 8,1999; her estate was not probated.

MAINE REAL ESTATE TAX PAID

WITNESS, my hand and seal this 10 day of June, 2013.

Witness

Louis A. Discatio
Grantor – Louis A. Discatio, Personal Representative
Estate of Joseph L. Discatio

Witness

Teresa A. Reo
Grantor – Teresa Reo, aka Theresa Discatio,
Personal Representative Estate of Joseph L. Discatio

State of Maine
Cumberland, SS

Personally appeared before me, the above named Louis A. Discatio and Teresa Reo, aka Theresa Discatio, in their capacity as Joint Personal Representatives of the Estate of Joseph L. Discatio, acknowledged the foregoing instrument to be their free act and deed, and subscribed the same.

Before me,
6-10-2013
Date

Andrew J. Doukas, Attorney At Law
ME BAR #2932

EXHIBIT A – LEGAL DESCRIPTION OF PROPERTY AT 665 CONGRESS STREET, PORTLAND, CUMBERLAND COUNTY, MAINE

PARCEL I

A certain lot or parcel of land with the buildings thereon, situated on the northwesterly corner of Congress Street and Congress Place, in said City of Portland, County of Cumberland and State of Maine, and having a frontage of thirty-eight (38) feet on Congress Street, and a frontage of about two hundred two (202) feet on Congress Place, with a depth of forty-five (45) feet at the northerly end. Said premises being bounded on the south by Congress Street, on the east by Congress Place, on the north by land now or formerly of T.A. and W.H. Roberts, and on the west by land now or formerly of H.W. and A. Deering, and by land of St. Stephens Church.

Congress Place is now known as Avon Street.

PARCEL II

First: A certain lot or parcel of land situated in said Portland on the easterly side of Vernon Court and numbered 13 and 15 on said Court, and being the same property conveyed by Grenville H. Deering to Ernest J. Eddy by deed dated November 2, 1907 and recorded in Cumberland County Registry of Deeds in Book 816, Page 149, to which deed and the deeds therein referred to reference is hereby made for a more particular description.

Second: A certain lot or parcel of land, with any buildings thereon, situated on the easterly side of Vernon Court in said Portland and being the most northerly lot of land on the easterly side of said Court and being the premises numbered 19 and 21 as shown on the city valuation plan recorded in Cumberland County Registry of Deeds in Book 5, Page 46, and being the same premises conveyed by Elizabeth E. Deering to said Ernest J. Eddy by deed dated December 18, 1908 and recorded in said Registry of Deeds in Book 835, Page 6, to which deed and the deeds therein referred to reference is hereby made for more particular description of the premises.

Third: A certain lot or parcel of land, with any buildings thereon, situated on the northeasterly side of Vernon Court, otherwise known as Vernon Place, and being the same property conveyed by Robert C. Schmidt to said Ernest J. Eddy by deed dated December 14, 1908 and recorded in said Registry of Deeds in Book 835, Page 4, to which deed and the deeds therein referred to reference is hereby made for a more particular description of the premises.

Fourth: A certain lot or parcel of land at 18-22 Avon Street running in a southerly direction towards Congress Street from the southerly boundary line of the former Kelsey property at the southwest corner of Avon and Deering Streets, a distance of seventy-three and one-half (73 ½) feet, more or less to a junction with the property now or formerly of the Avon Corp. located at the west corner of Avon and Congress Streets, bounded on the southerly side by the said property now or formerly of the Trustees of the Dalton Memorial Chapel and Burnham Hall; bounded on the west by property now or formerly of the Trustees of the Dalton Memorial Chapel and Burnham Hall and

bounded on the north by said former Kelsey property and property now or formerly of said Avon Corp.

Fifth: A certain lot or parcel of land at number 11 (called 5) Vernon Place, together with the brick frame dwelling, or apartment house thereon, the said property being bounded as follows: On the northerly side by the land, brick and frame house of the said Dalton Memorial Chapel and Burnham Hall, a distance of forty-five (45) feet, more or less, on the easterly side by property now or formerly of the Avon corp. located at the northwesterly corner of Congress and Avon Streets a distance of approximately thirty-six (36) feet, more or less, to a junction with the land and Parish house of the Rector, Wardens and Vestrymen of St. Stephen's Parish, or Church; on the southerly side by the said land and Parish House of said Rector, Wardens and Vestrymen of St. Stephens's Parish or Church; on the westerly side by the line of Vernon Place.

Sixth: Also releasing and conveying all my right, title and interest in the following described real estate: A certain lot or parcel of land with (any) buildings thereon, situated on the northerly side of Congress Street and numbered 665 ½ Congress Street and now or formerly known as "Joe's Smoke Shop," said land beginning at a point one hundred and eighty-five (185) feet, more or less, from State Street at the easterly line of St. Stephen's Episcopal Church edifice and extending in an easterly direction eight and one-half (8 ½) or nine (9) feet thence in a northerly direction a distance of thirty-six (36) feet; thence approximately seven (7) feet in a westerly direction to the easterly wall of the said St. Stephen's Episcopal Church edifice, the said wall being the westerly boundary of the said property.

Seventh: Also a certain other lot or parcel of land, with any buildings thereon, known as St. Stephen's Church, and situated on the northerly side of Congress Street in said Portland, bounded and described as follows:

Said lot is on the corner of Congress Street and Vernon Court, so-called, and is sixty-three (63) feet on Congress Street running back on Vernon Court one hundred and thirty (130) feet, more or less, on the easterly side of said court as far northerly as the land formerly owned and occupied by Hiram W. and Alvin Deering, said lot is bounded on the easterly side thereof by a line described in a Decree of the Supreme Judicial Court held in and for the County of Cumberland, April Term 1838 in the case of Hannah Harding In Equity vs. Job Randall, as a "line drawn from the northerly corner of said lot to Main Street and intersecting said Street two (2) feet easterly of the easterly end of the dwelling house in said pleadings mentioned and excluding the well near said house," to which Decree, duly entered on the Docket of said Court, in said suit, reference for a particular description of said easterly side line of the lot hereby conveyed is always to be had.

Meaning and intending to convey, and hereby conveying, all right, title and interest in and to lots 19-23 as shown on City of Portland Assessors Chart Plan 46, Block C, as recorded in the City Assessors, Portland, Maine.

Meaning and intending to convey, and hereby conveying, all real estate of the grantor which is situated in the block in said Portland which is bounded southerly by Congress Street; westerly by Vernon Place and easterly by Avon Street.

Received
Recorded Register of Deeds
Jun 10,2013 03:36:33P
Cumberland County
Pamela E. Lovley

PLANNING BOARD REPORT
PORTLAND, MAINE

B3 Zoning Map Amendment for Rental Apartments
Level III Zoning Map Amendment
2015-041
Redfern Properties, Applicant

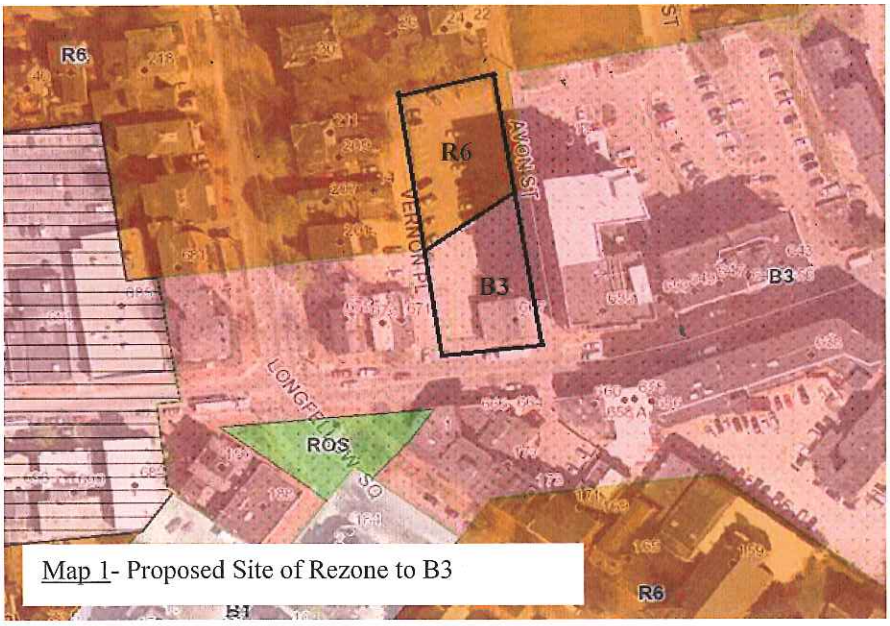
Submitted to: Portland Planning Board: Public Hearing Date: May 12th, 2015	Prepared by: Shukria Wiar, Planner Date: May 8th, 2015

I. INTRODUCTION

On behalf of MSD Properties, LLC, Jonathan Cully of Redfern Properties has submitted an application for a zoning map amendment for the property at 667 Congress Street. Redfern Properties is working in partnership with MSD Properties, LLC and Joe's Super Variety to redevelop the property. The site is divided by two different zones; the front portion along Congress Street is in the B3 zone and the rear portion is in the R6 zone. As part of the zone change, the applicant is proposing to extend the B3 to include the R-6 portion in the rear of the property, making the site consistent with the zoning on adjacent properties to the east and south. The applicant is seeking to amend the zoning to allow for an integrated development of multifamily apartment building with Joe's Super Variety occupying the first floor along Congress Street with parking behind the storefront.

The property proposed for rezoning totals approximately 25,740 square feet with 98 feet of frontage on Congress Street. It also has frontage along Avon Street and Vernon Place.

It should be noted that the proposal includes the modification of the B-3 Downtown Height Overlay Zone to encompass the area of the proposed zone change, which would establish 85 feet as the maximum height limit. The zone change would also, in effect, extend the Downtown Entertainment Overlay Zone, which is defined by the boundaries of the B3, B3(c) and WCZ zones. The property is also in the Congress Street Historic District.



Map 1- Proposed Site of Rezone to B3

The portion of the property proposed for rezoning to B3 is currently within the R6 zone.

A notice of this Workshop was sent to 284 property owners within 500 feet and interested citizens, and appeared in the May 4th and 5th, 2015 editions of the *Portland Press-Herald*. A Neighborhood Meeting is required for this project and the applicant has confirmed that the neighborhood meeting was held last week on April 8th, 2015. At the time of preparing this report the Planning Division has received two written comments, please Attachment PC1.

II. PROJECT DATA

Parcel Size:	25,740 sq ft: 12,221 sq ft in B3 zone and 13,519 sq ft in the R6 zone
Current Zoning:	Residential R6 and Downtown Business B3
Proposed Zoning:	Downtown Business B3
Existing Uses:	Retail; Surface parking
Proposed Use:	Multifamily Rental Units - Approximately 130 units, retail, and structured parking

III. EXISTING CONDITIONS AND ZONING

The site is split between the R6 and B3 zones. The north and north-west sides of the site abut the Deering Street neighborhood, which is composed of single and multifamily homes (all within R6 and the Deering Street Historic District). The property is located within the Congress Street Historic District.

Currently, the site contains a two and half story building that houses Joe's Smoke Shop and a surface parking lot with approximately 58 parking spaces that are rented out to abutting properties. Avon Street is a one way street that goes through to Deering Street, whereas Vernon Place is a two-way, dead-end street. Both streets are public streets. There is one entry to the parking area via Vernon Street. There are three curb cuts on Avon Street to the site; however all of the curb cuts are blocked with guardrails.

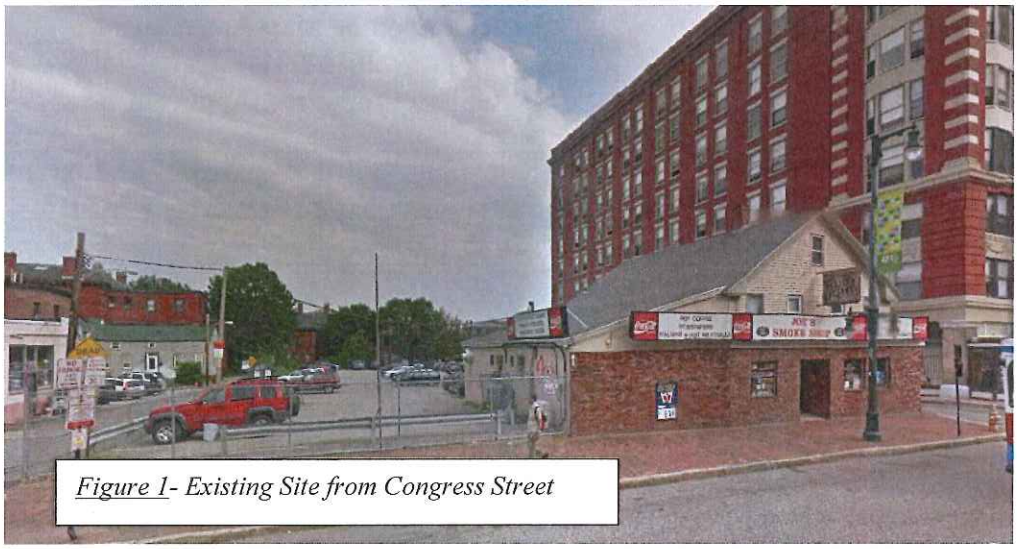
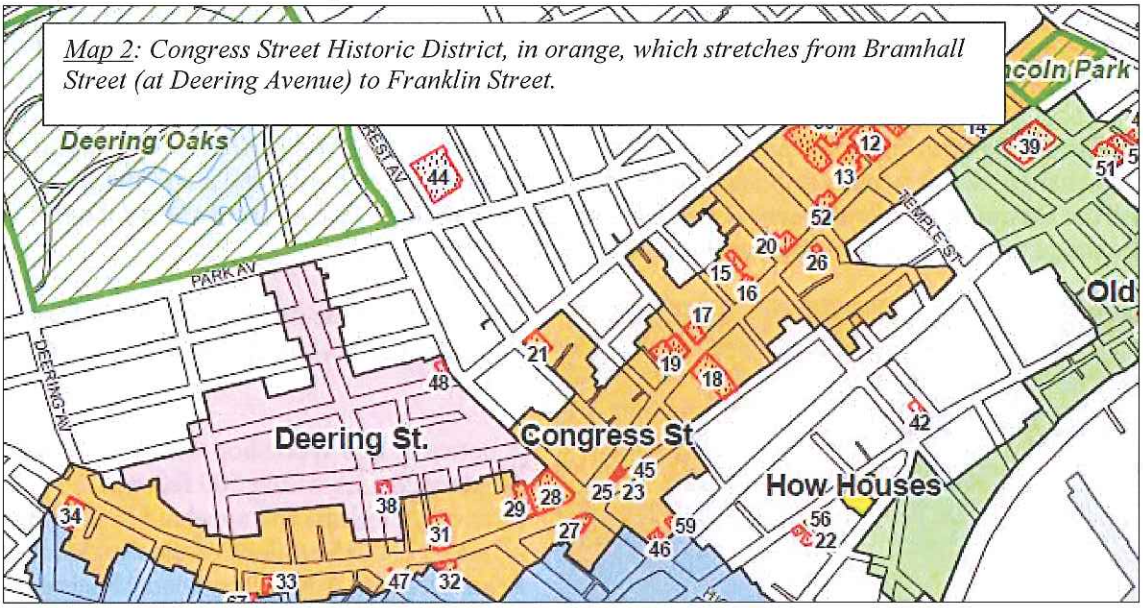


Figure 1- Existing Site from Congress Street



Map 2: Congress Street Historic District, in orange, which stretches from Bramhall Street (at Deering Avenue) to Franklin Street.

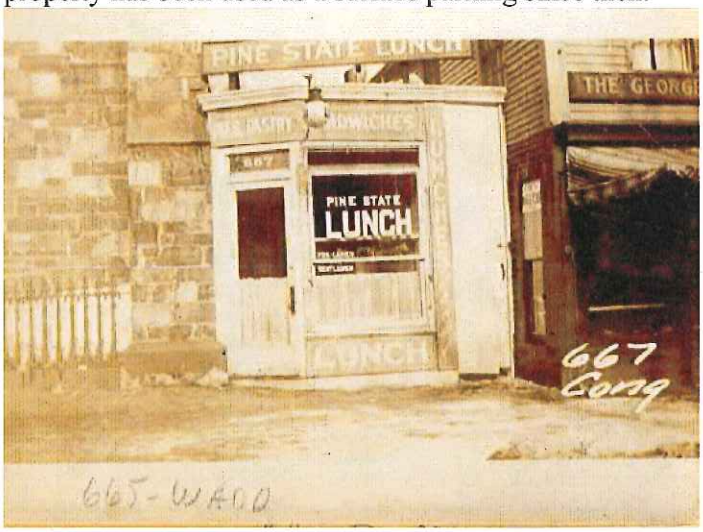
The property is located within the Congress Street Historic District, and is generally characterized by medium- to large scale residential development of a historic nature. The properties directly across Congress Street are marked by residential multi-family development and commercial businesses.

The Joe's Smoke Shop building is considered noncontributing to the Congress Street Historic District and can therefore be demolished to make way for the redevelopment project.

Historic photographs of the subject parcels generally show residential and business development of the type characteristic of Congress Street today. A church, a lunch room, and general store occupied the proposed site at the time of the 1924 tax records.

Figures 2 & 3: 1924 tax photos showing 665 Congress Street and 667 Congress Street both on the lot now zoned B-3 in the front portion.

The St. Stephen's Church was razed in 1965 and the property has been used as a surface parking since then.



IV. PROPOSED DEVELOPMENT

The applicant is proposing to change the R6 portion of the property to the B3 zone that would designate the entire property into the one zone. The B3 zone runs the length of Congress Street from State Street to Franklin Arterial. The B-3 zone is approximately 100 feet deep on the Vernon Place side and is approximately 150 feet on the Avon Street side of proposed site. While the depth of the B-3 zone is 280 feet on the adjoining property to the east (see map amendment on page 1). The applicant is seeking to develop approximately 130 residential units on the site, thus the B-3 zone is requested in order to achieve the overall density for the project. The density limits and height limitation in the R6 zone constrain the redevelopment of this site.

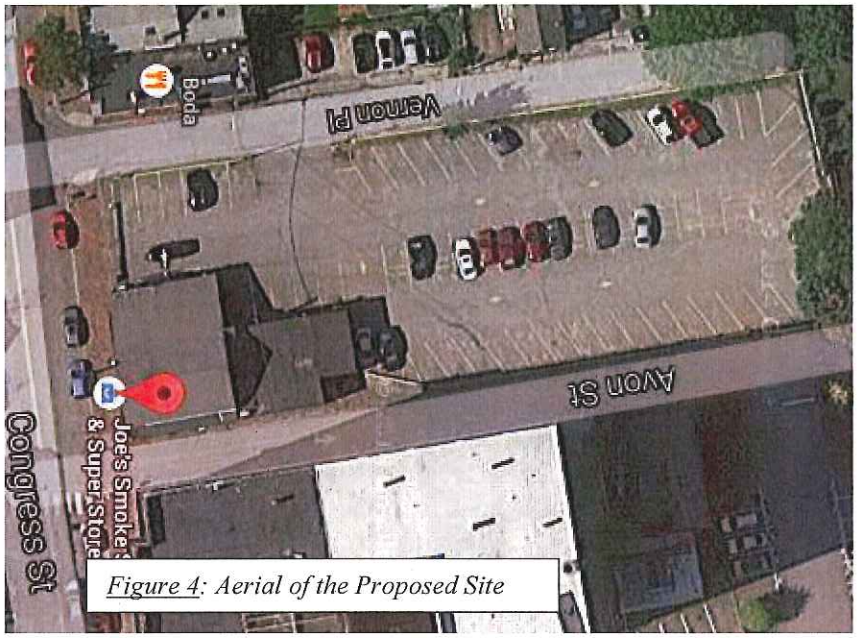


Figure 4: Aerial of the Proposed Site

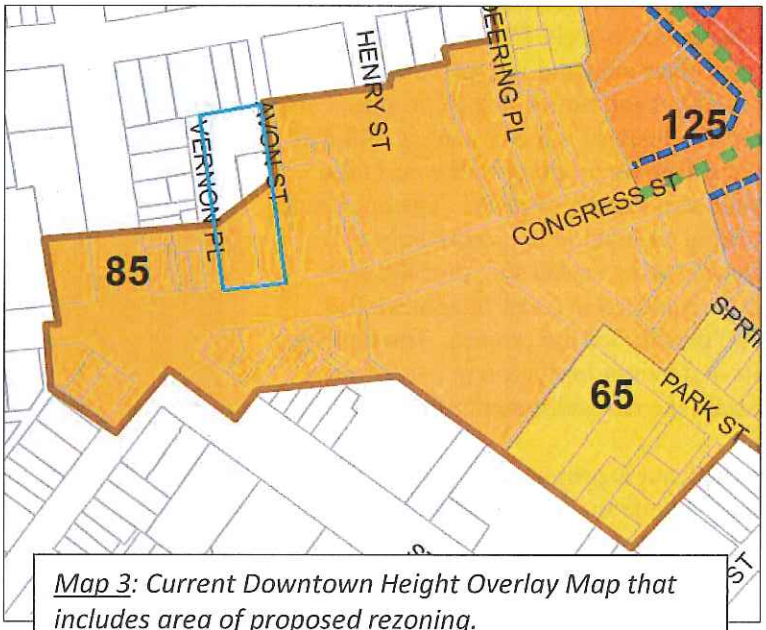
The applicant is proposing to extend the B3 zone to include the rear portion of the property, making them consistent with the zoning on adjacent properties to the east and south (refer to map amendment on page 1). The applicant is seeking to amend the zoning to allow for an integrated development of a seven- to eight- story multifamily apartment building with Joe's Super Variety occupying the front portion (Congress Street) of the first floor. The basement and first level will house the parking spaces (59 on the basement level and 49 spaces on first level, 108 in total) for the building uses. The remaining floors would be the rental apartments. The site would be accessed via two entrances: one off of Avon Street and one off of Vernon Place. Parking, access and other aspects are conceptual at this stage.

The parcel currently contains a surface parking lot with spaces within 35' of adjacent streets. Surface parking, whether existing or proposed, may not be located within 35' of the street, which in this case includes Vernon and Avon. These spaces, as proposed, are considered structured parking, in which case they are allowed.

Figure 5: Proposed First-Floor Plan and Building Rendering from Congress St

The proposed amendment also includes modifications to the city's Downtown Height Overlay. The maximum building height in the B3 zone is regulated by the Downtown Height Overlay Map, which establishes height restrictions ranging from 45 feet to 210 feet across the B3 zone. The height overlay zone sets an 85 foot height limit for the area in the existing B3 zone bounded by Congress and Avon Streets, and Vernon Place.

The applicant would like the entire property to be the B3 zone with the maximum height of 85' for the whole site as well. Planning Division staff has suggested that the property be at 85' but the rear of the property height be limited to 45' since the rear portion of the property is abutting residential uses and the R6 zone. The actual setback from the rear property line to the building is approximately 45' but staff would suggest 40' setback.



Map 3: Current Downtown Height Overlay Map that includes area of proposed rezoning.

in

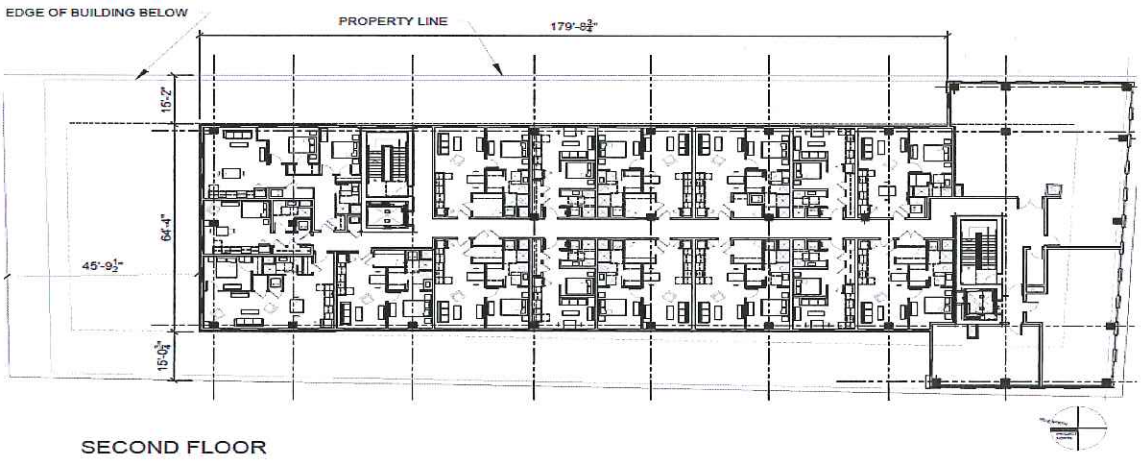
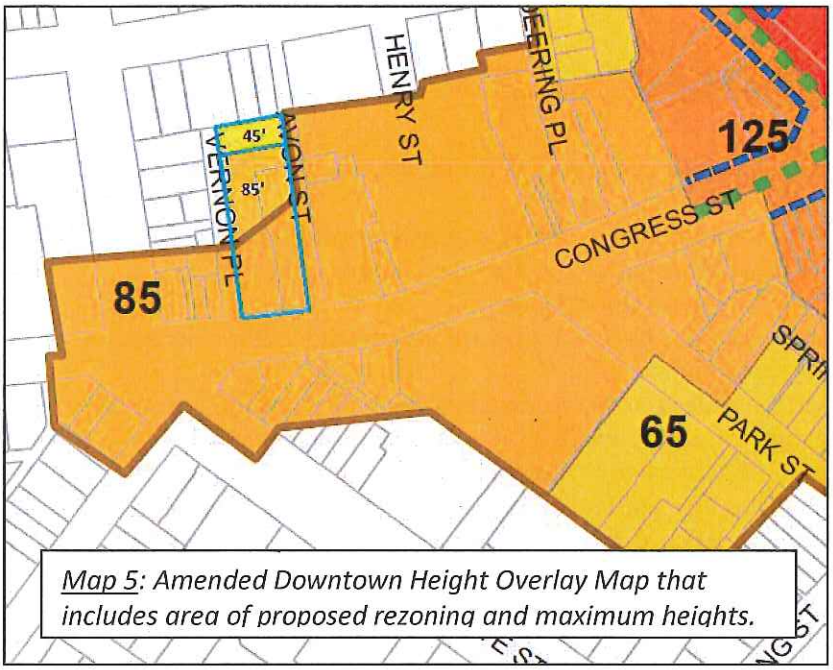


Figure 6: Rear dimensions of the property that is suggested to be 45' maximum height

Under the proposed zone change, the Downtown Height Overlay map would be amended to extend the 85 foot maximum building height to be contiguous with the proposed B3 map amendment and have the rear 40' of property be at 45' maximum (see Map 5).



Map 5: Amended Downtown Height Overlay Map that includes area of proposed rezoning and maximum heights.

As noted above, the Downtown Entertainment Overlay Zone would also be extended to cover the rezoned area as part of the map amendment. The Downtown Entertainment Overlay Zone establishes a 100 foot dispersal requirement for facilities with entertainment licenses. Since the Downtown Entertainment Overlay Zone refers explicitly to and is defined by the B3 zone by ordinance, any map amendment altering the limits of the B3 zone would incorporate the Downtown Entertainment Overlay Zone.

V. ZONING ANALYSIS

The property is located in the R6 and B3 zones. Section 14-51 Extension of zone lines allows a less restrictive zone to extend no more than thirty (30) feet into a restrictive zone, below is the specific language of the section:

> *Where a zone boundary line divides a lot in single or joint ownership of record at the time such line is established, the provisions of this article for the less restricted portion of such lot shall extend not more than thirty (30) feet into the more restricted portion, provided that the lot has at least twenty (20) feet of street frontage in the less restricted zone when taken together with adjacent premises which are under the same or equivalent ownership or control. If such boundary line divides a business or industrial zone from a residence zone, no frontage on a street other than the principal business street in the less restricted zone may be taken into consideration in connection with the right herein granted. This section shall not apply to differing dimensional requirements, including height, within a zoning district.*

This section is not practical in this situation since the R-6 zone portion of the lot is more than thirty feet. Even if the zone boundary is extended into the more restrictive R-6 zone, a portion of the proposed building would extend into the R6 zone, and the zone line extension does not allow an increase in height. Therefore, this ordinance provision does not resolve the issue of divided zone lines for the proposed redevelopment.

Zoning Purposes

The current R6 zoning is designed to promote neighborhood-scale housing and compatible retail. The purpose of the R6 zone, which is found in the East and West Ends of the city, is to "*set aside areas...for housing characterized primarily by multi-family dwellings at a high density*" and to "*conserve the existing housing stock and residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses*" (Section 14-135). It should be noted that the R6 zone does encourages high-density housing on the peninsula.

The stated purpose of the B3 zone, or the proposed zoning designation, is clearly intends to increase housing opportunities and encourage mixed-use activities. However, the B3 zone also has some purposes which are distinct from the R6 – to

"enhance and promote the orderly expansion of retail and service businesses downtown," to *"provide adequate parking and transportation facilities which promote accessibility, enhance and encourage development activity,"* and *"reinforce the role of the downtown as a meeting place for community residents and visitors alike..."* (Section 14-203). Table 1 compares the purposes of the two zones as written in the zoning ordinance.

Table 1: Purposes of the R6 and B3 Zones

	R6 Residential	B3 Downtown Business
Purpose	To set aside areas on the peninsula for housing characterized primarily by multifamily dwellings at a high density providing a wide range of housing for differing types of households; and to conserve the existing housing stock and residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses. In cases of qualifying small, vacant, underutilized lots located in the urban residential and business zone, to encourage new housing development consistent with the compact lot development pattern typically found on the peninsula.	To: 1. Maintain and enhance the role of the downtown as the business and commercial center of the region; 2. Enhance and promote the orderly expansion of retail and service businesses downtown, satisfying the related needs of the city's resident, working and visitor populations; 3. Encourage increased housing opportunity downtown for a diverse residential population; 4. Enhance the pedestrian environment through the encouragement of intensive mixed-use activities, through the enhancement and maintenance of public and private open space, and through the enlivenment and increased attractiveness of the street environment; 5. Encourage excellence in urban design; 6. Preserve and capitalize on the unique character and historic fabric of the downtown through the encouragement of reuse of significant existing structures; 7. Provide opportunity for an enhanced presence and integration of the arts and cultural activities downtown; 8. Reinforce the role of the downtown as a meeting place for community residents and visitors alike from all walks of life and all socio-economic groups; 9. Provide adequate parking and transportation facilities which promote accessibility, enhance and encourage development opportunity, and enhance and protect the pedestrian environment; and 10. Provide for the relocation of residents who are displaced by development.

Permitted Uses

In accordance with their distinct purposes, the R6 generally permits less intensive uses than the B3 zone. The R6 limits development almost exclusively to residential uses, with an exception for low-intensity, compatible uses such as cemeteries, parks, bed and breakfasts, and lodging houses. Some slightly more intense uses, including schools, extended care facilities, places of assembly, hospitals, professional offices, and off-street parking for uses permitted in the R6 zone, are allowed under a conditional use permit. The zone does not permit businesses uses.

As the purposes indicate, the B3 zone permits the most intensive range of uses of the two zones being considered here. The B3 therefore allows residential development similar to that of the R6 zone, but also allows offices, retail establishments, restaurants, drinking establishments, repair services, theaters, hotels, and parking garages by right. Museums, schools, clinics, places of assembly, and county and municipal offices are also permitted. Under conditional uses, the B3 permits light industrial, drive-up banking, emergency shelters, and surface parking.

Table 2: Permitted Uses in the R6 and B3 Zones

	R6 Residential	B3 Downtown Business
Residential	Single- and two-family dwellings Multi-family dwellings Handicapped family units Single-family, single- and multiple-component manufactured housing	Attached single-family, two-family and multi-family dwellings Handicapped family units Lodging houses Combined living/working spaces
Business		General and business offices Professional offices Personal services Offices of building tradesmen Retail establishments, excluding gasoline sales, wholesale and bulk purchase construction supply sales Restaurants, excluding drive-through or drive-in restaurants Drinking establishments Billiard parlors Repair services, excluding motor vehicle repair services Communication studios or broadcast and receiving facilities Health clubs and gymnasiums Theaters and performance halls Convention facilities Hotels Business services Parking garages Galleries Registered medical marijuana dispensaries
Institutional		Public or private schools Clinics Places of assembly Nursery schools, kindergartens, and day care facilities Museums College, university, trade school Governmental offices
Other	Lodging houses Conversion of a structure into a bed and breakfast with four rooms Hostels with less than 10 guests Wind energy systems Accessory uses Cemeteries Parks, and recreation spaces Home occupation Municipal uses Special needs independent living units	Bed and breakfasts Hostels Wind energy systems County and municipal uses Studios for artists and craftspeople Printing, publishing and related manufacture of cardboard or paper boxes
	R6 Residential	**B3 Downtown Business**

Conditional	Residential Sheltered care group homes Conversion of a structure into a bed and breakfast with 5+ rooms Institutional Elementary, middle, and secondary schools Long-term and extended care facilities Intermediate care facilities Places of assembly Hospitals College, university, or trade school Other Utility substations Professional offices Chancellery Nursery school and kindergartens Off-street parking for uses permitted in the R6 zone Day care facilities Hostels with no more than 20 guests Wind energy systems[1] Temporary wind anemometer towers	Utility substations Drive-up banking services Light industrial uses Emergency shelters Surface parking Temporary wind anemometer towers

Dimensional Requirements and Form
Lastly, the two zones differ extensively in terms of the form of building that is promoted through dimensional requirements, again with the B3 encouraging denser, more urban development than the R6 zone. Thus, the R6 provides certain density controls – minimum lot size, minimum area per dwelling unit, maximum lot coverages, and minimum open space ratios – that limit the build-out of any given parcel. The R6 zone also has setback requirements of 10-20 feet, which guarantees that buildings will be separated both from each other and the street. The B3 comparatively does not include minimum lot sizes or minimum areas per dwelling unit, and does not require setbacks.

The R6 zone has a maximum building height of 45 feet. The proposed R-6 amendments recommended by the Planning Board were approved by the City Council on May 4th. The proposed revisions increase the density of the R-6 zone, but the maximum building height remains unchanged at 45 feet in the draft. As noted above, the maximum building height in the B3 zone is regulated by the Downtown Height Overlay Map. Under the proposed amendment, the Height Overlay would be extended to cover the rezoned area, with a maximum building height of 85 feet at most of the site and 45 feet at the rear of the property, see Attachment 1.

In terms of design and building form, the site is located within the Congress Street Historic District and would be subject to review under the Historic Preservation Ordinance. If the site is rezoned to B3, the development would require a certificate of appropriateness from the Historic Preservation Board and would be exempt from the B-3 Design Guidelines except for the following provisions (Section 14-526 (d) 5:

Developments affecting designated landmarks or within designated historic districts or historic landscape districts: Any proposed development required to obtain a certificate of appropriateness under article IX (historic preservation) of the land use code shall be exempt from the following design standards, as described in the Design Manual:

(i) Section (b) of the Design Manual (development in B-3 zone), except for (b) (1) e.2. (increasing setback beyond street build-to line), (b) (1)f. (shadow impact on open space), (b)(1)h. (wind impacts), and (b)(1)g. (setbacks from existing structures);

Table 3: Dimensional Requirements in the R6 and B3 Zones

		Existing R6	Proposed R6	B3
Minimum lot size		4,500 SF+ (depending on use)	2000 SF	None
Minimum area per DU		1,000 SF	725 SF	
Minimum street frontage		40 ft.	20 ft.	15 ft.
Minimum lot width		40 ft.	20 ft.	None
Min./Max. front yard	Principal	10 ft. min.	5 ft. or no more than average depths of adjacent front yards.	5 ft. max.
	Accessory			
Min. rear yard	Principal	If > 100 SF footprint, 20 ft.	10 ft.	None
	Accessory	If < 144 SF footprint, 5 ft.	If <144 SF footprint. 5ft	
Min. side yard	Principal	If > 100 SF footprint, 1-3 stories....10 ft. 4 stories.....12 ft. 5 stories.....15 ft.	5 ft., except that a side yard in the R-6 zone may be reduced to zero, provided that the cumulative side yard setbacks are not less than 10 ft.	None
	Accessory	If > 100 SF footprint, 20 ft.		
	On side streets		None	
Max. lot coverage		If < 20 DU, 50% of lot area If > 20 DU, 40% of lot area	60%	100%
Open space ratio		If < 20 DU, 20% of lot area If > 20 DU, 30% of lot area	20%	
Max./Min. building height	Principal	45 ft. max.	45 ft. max	35 ft. min. if within 50 ft. of street; 85 ft. max.
	Accessory	18 ft. max.	18 ft. max	

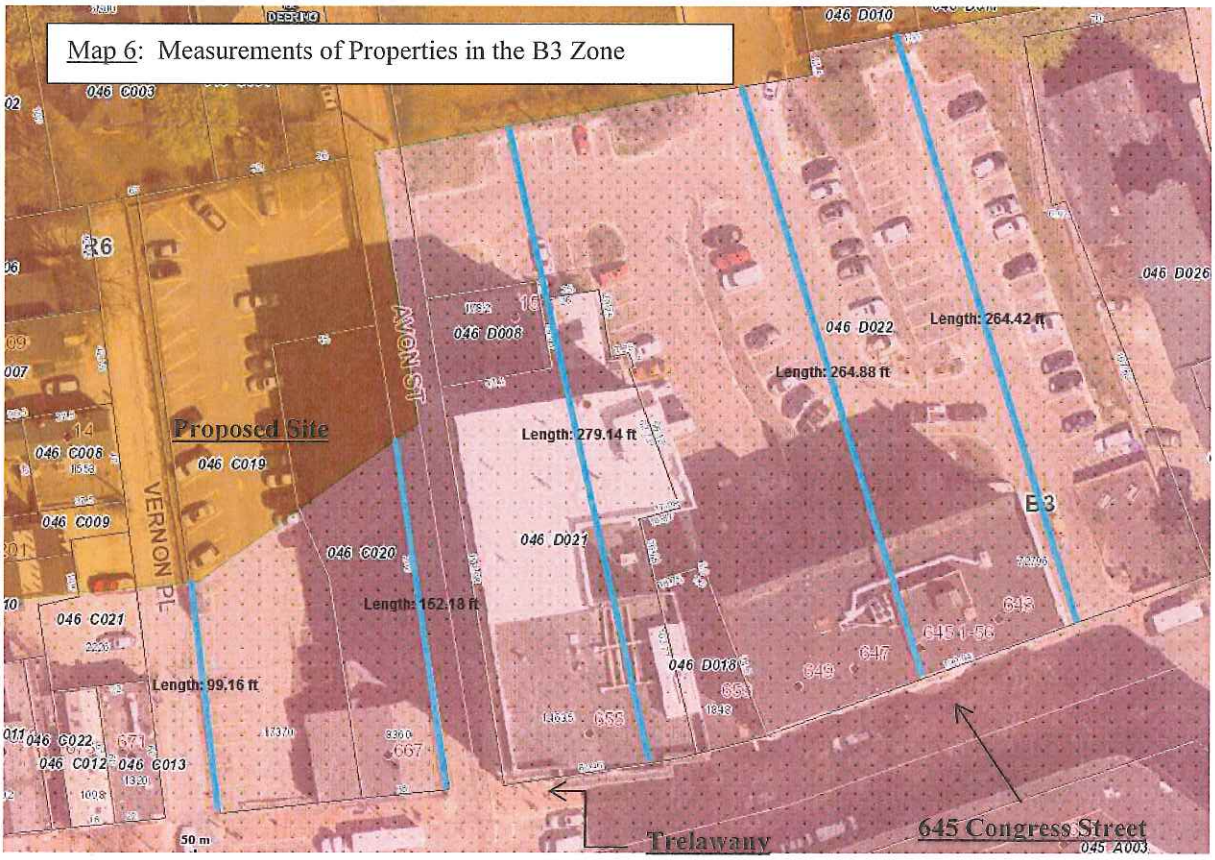
VI. STAFF COMMENTS

A. Zoning Analysis

As stated previously, the applicant is proposing that the site will consist of approximately one hundred and thirty-two (132) rental units. The site area is approximately 25,740 sq. ft. Congress Street is one of central streets located on the peninsula and is within walking distance of downtown or other work places and shopping.

The Planning Division believes this site, currently a relatively large parcel in the R6 and B3 zones with a business use, is a good candidate lot for the B3 zone (refer to Comprehensive Plan review below). The B3 zone stretches along Congress Street from State Street to Franklin Arterial. The larger scale and density works reasonably well here, on a street that has significant variety of building types and scale. To the east of this property, are the Trelawney Building at 655 Congress Street and an apartment building at 645 Congress Street. The Trelawaney Building is entirety in the B3 zone as well as a single family home in the back. As for the property at 645 Congress Street, the B-3 zone is approximately 265 feet deep

into the site; the rear portion of the site is in the R6 zone. While the depth of the B-3 zone is 280 feet on the adjoining property to the east (see map amendment on page 1), it seems like the proposed site may have been the transition property in the two zones. A possible reason for this would have been to protect the R6 zone to the north and west. As part of the proposal for the rezone, staff has recommended the back portion of approximately 40 feet from the property line be a maximum height of 45 feet. The properties across Vernon Place are all multifamily homes, except along Congress Street (portion that is in the B3 zone). Below is aerial map that shows the depth of the B3 zone line of the proposed site and the properties to the east.



Across the street from the proposed property is the George S. Hunt Block and Lafayette Building. The applicant has submitted a Neighborhood Birdseye View (below) that shows these buildings as well as the stories of each building.

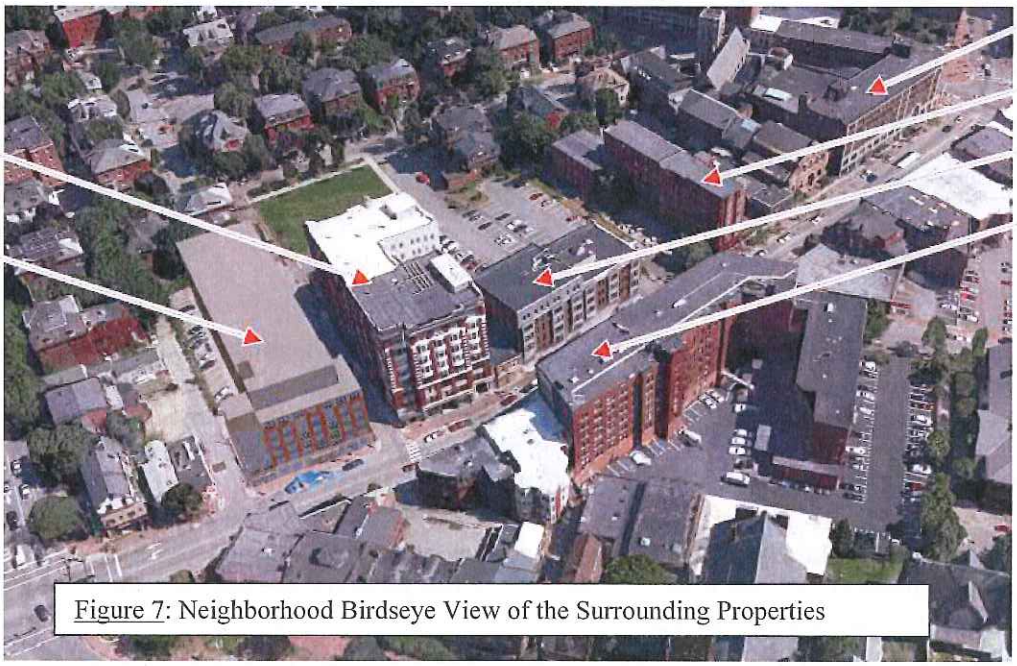


Figure 7: Neighborhood Birdseye View of the Surrounding Properties

The proposed zone change will provide increased density in an area that is central to services such as businesses, institutions, employers and public transportation. It will also provide compact in-city living for renters that represent a variety of income levels.

Since there is a density cap and height limitation in the R6 zone, the B3 zone appears a better option for the development of this project. The Comprehensive Plan encourages development of infill projects on the peninsula, with less required parking spaces to promote walking to work and shopping or to utilize public transportation.

B. Density Considerations

It is difficult to analyze the maximum numbers of units that might be possible under each of the two zones in the table (R6 and B3) because the mix of units. The applicant has indicated that the number of dwelling units would be approximately 130 units, so the density would be 159 square foot of land area per unit proposed. For further assessment by staff, the applicant is requested to submit information on the extreme limit of build-out of the property under the two zones.

VII. COMPREHENSIVE PLAN ANALYSIS

Goals and policies from the Comprehensive Plan which are relevant to the proposed map amendment have been included below:

Portland Housing Goal: Ensure that an adequate supply of housing is available to meet the needs, preferences, and financial capabilities of all Portland households, now and in the future.

Policies

- Encourage higher density housing for both rental and home ownership opportunities, particularly located near services, such as schools, businesses, institutions, employers, and public transportation.

- Increase Portland's rental housing stock to maintain a reasonable balance between supply and demand yielding consumer choice, affordable rents, and reasonable return to landlords.

- Identify vacant land and redevelopment opportunities throughout the City to facilitate the construction of new housing.

- Evaluate and update current zoning, as needed, to encourage higher density multi-family developments and mixed use projects that incorporate housing, particularly along major public transportation routes, near services areas, and in redevelopment or infill areas, where appropriate.

Portland Housing Goal: Maintain and enhance the livability of Portland's neighborhoods as the City grows and evolves through careful land use regulations, design and public participation that respects neighborhood integrity.

Policies

- Encourage innovative new housing development, which is designed to be compatible with the scale, character, and traditional development patterns of each individual residential neighborhood.

- Encourage new housing development in proximity to neighborhood assets such as open space, schools, community services and public transportation.

- Ensure the integrity and economic value of Portland's neighborhoods.

GENERAL NOTES:

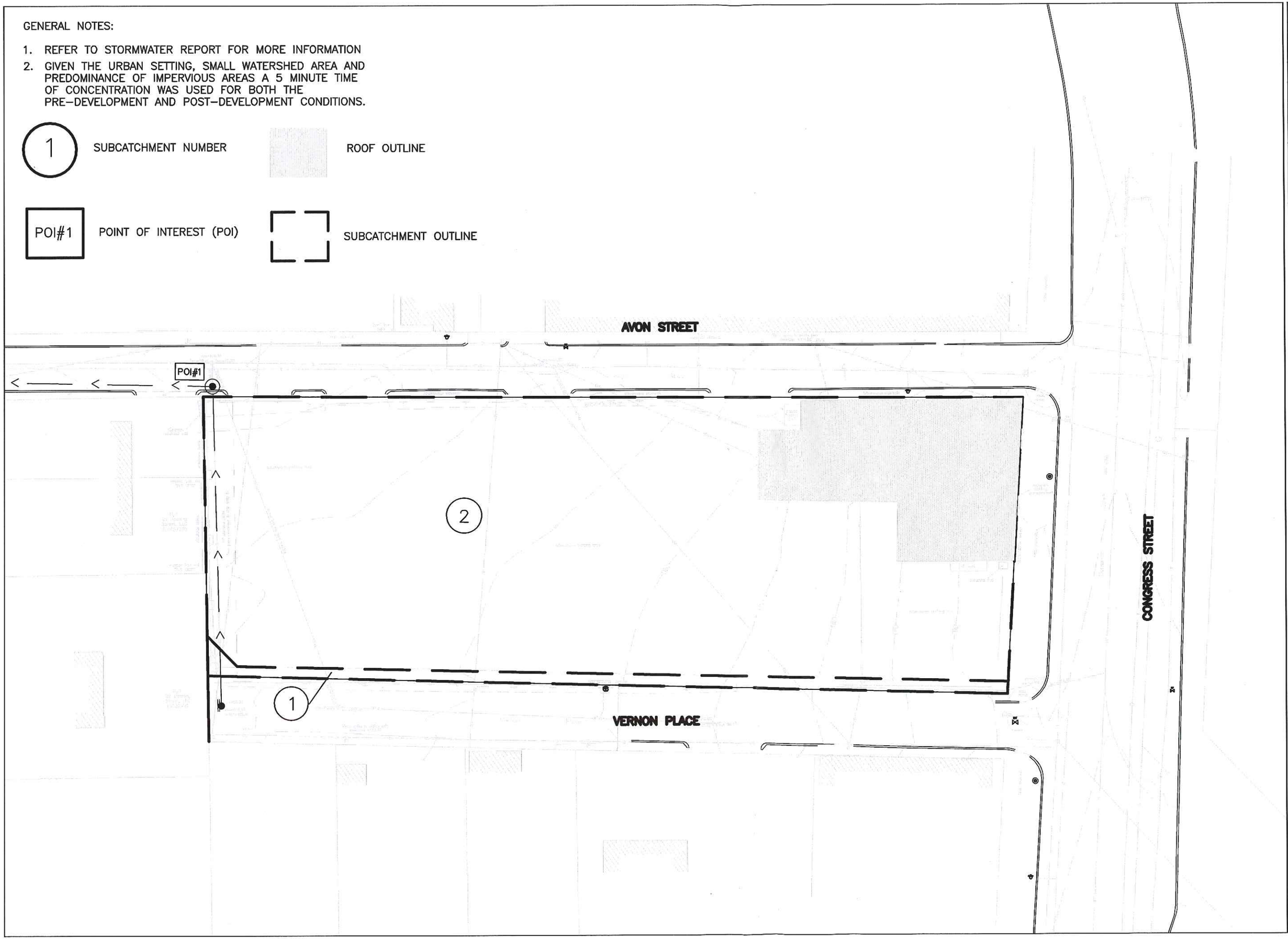
1. REFER TO STORMWATER REPORT FOR MORE INFORMATION
2. GIVEN THE URBAN SETTING, SMALL WATERSHED AREA AND PREDOMINANCE OF IMPERVIOUS AREAS A 5 MINUTE TIME OF CONCENTRATION WAS USED FOR BOTH THE PRE-DEVELOPMENT AND POST-DEVELOPMENT CONDITIONS.

(1) SUBCATCHMENT NUMBER

ROOF OUTLINE

POI#1 POINT OF INTEREST (POI)

SUBCATCHMENT OUTLINE



ISSUED FOR	BY DATE
REVISION	REV. DATE

DRAWING NAME: PRE-DEVELOPMENT STORMWATER PLAN

PROJECT NAME: 667 CONGRESS ST. REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC
P.O. BOX 3372
PORTLAND, MAINE 04104
(207) 775-2655

FILE:	1060_CIVIL
DATE:	7/29/15
JN:	1060
SCALE:	1"=20'
DESIGN BY:	WHS
DRAWN BY:	
CHECKED BY:	WHS

DRAWING NO.

PRE

GENERAL NOTES:

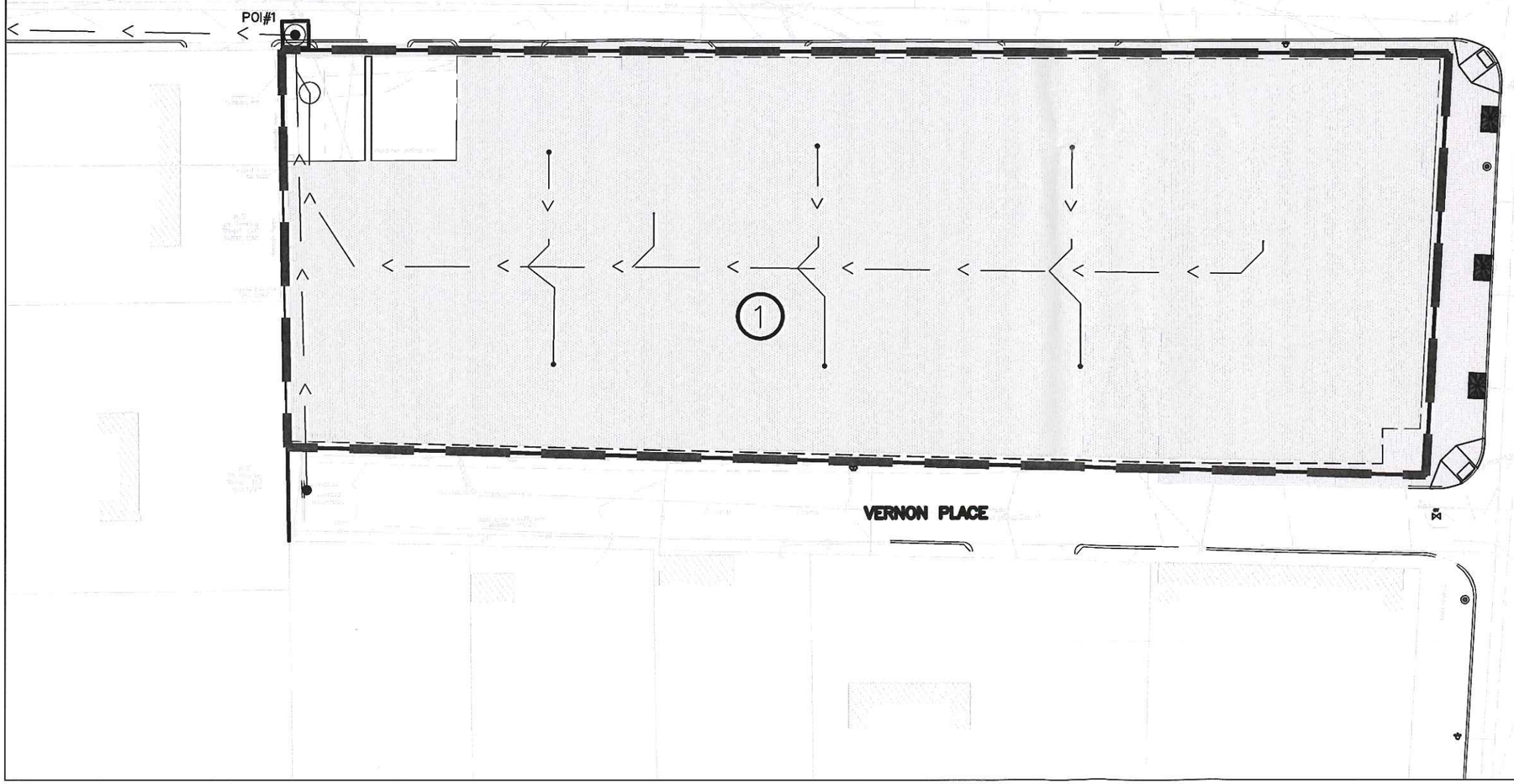
1. REFER TO STORMWATER REPORT FOR MORE INFORMATION
2. GIVEN THE URBAN SETTING, SMALL WATERSHED AREA AND PREDOMINANCE OF IMPERVIOUS AREAS A 5 MINUTE TIME OF CONCENTRATION WAS USED FOR BOTH THE PRE-DEVELOPMENT AND POST-DEVELOPMENT CONDITIONS.

(1) SUBCATCHMENT NUMBER

ROOF OUTLINE

POI#1 POINT OF INTEREST (POI)

SUBCATCHMENT OUTLINE



ISSUED FOR	BY DATE
REVISION	REV. DATE

DRAWING NAME: POST-DEVELOPMENT WATER QUALITY PLAN

PROJECT NAME: 667 CONGRESS ST. REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC
P.O. BOX 3372
PORTLAND, MAINE 04104
(207) 775-2655

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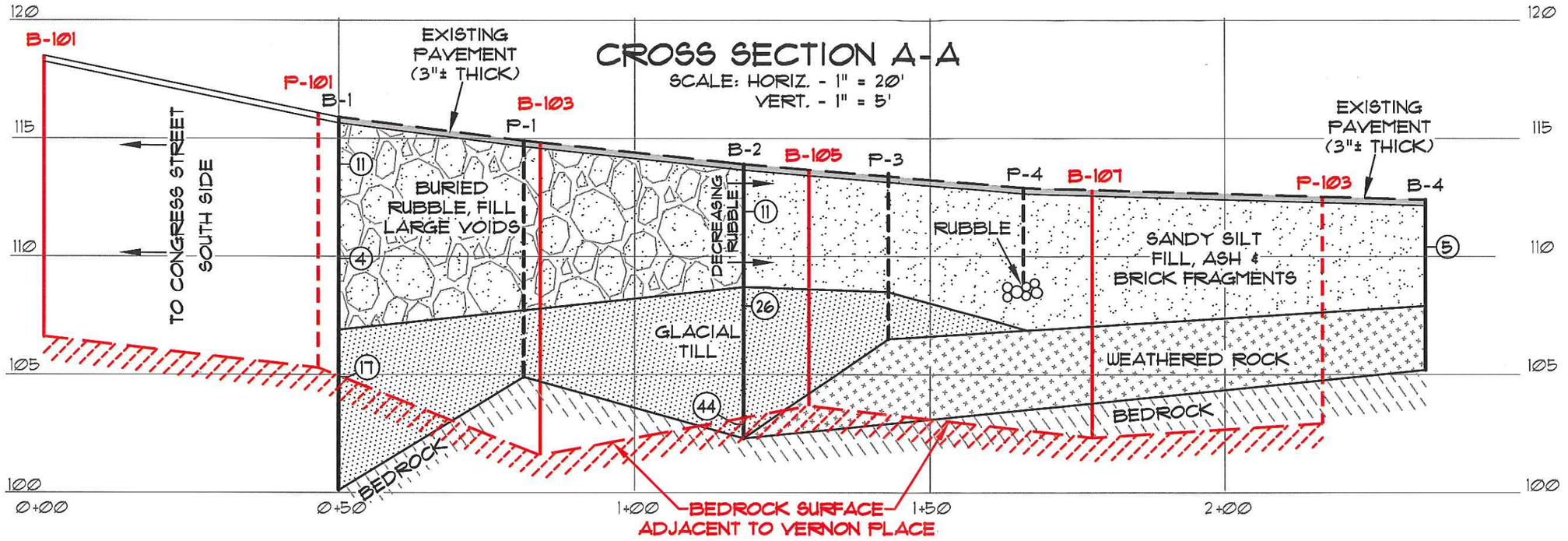
JN:	1060
SCALE:	1"=20'
DESIGN BY:	WHS
DRAWN BY:	
CHECKED BY:	WHS

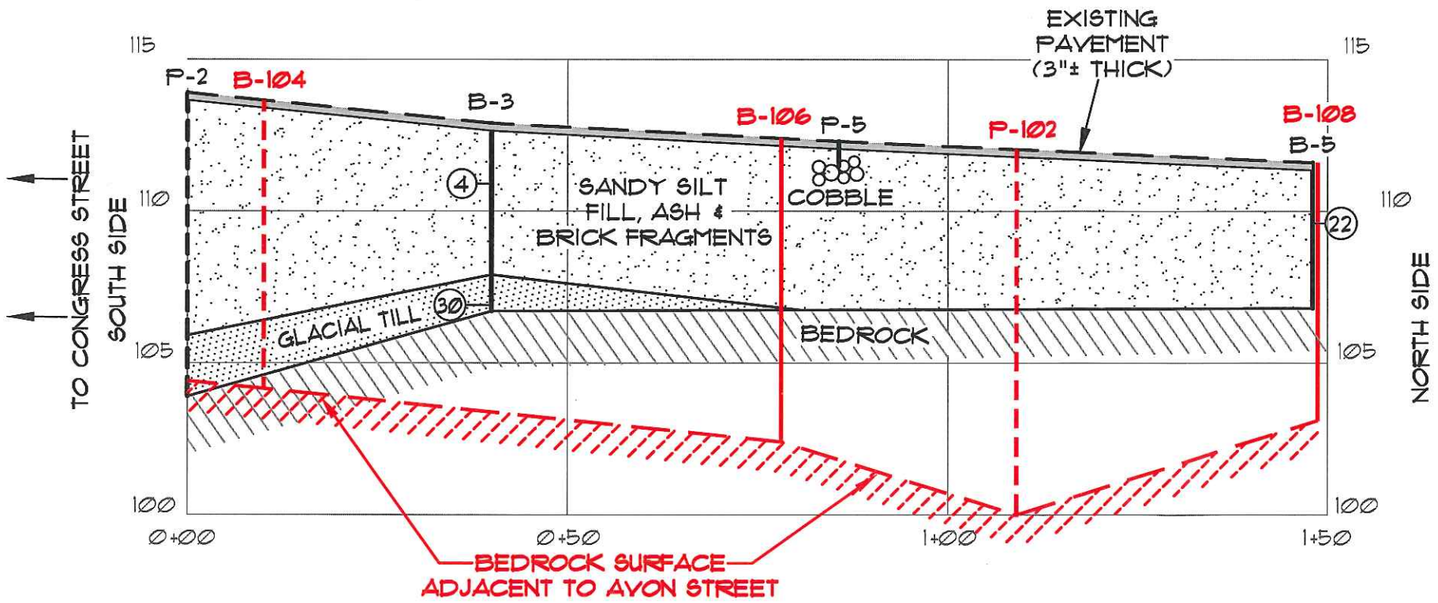
DRAWING NO.

POST

CROSS SECTION A-A

SCALE: HORIZ. - 1" = 20'
VERT. - 1" = 5'

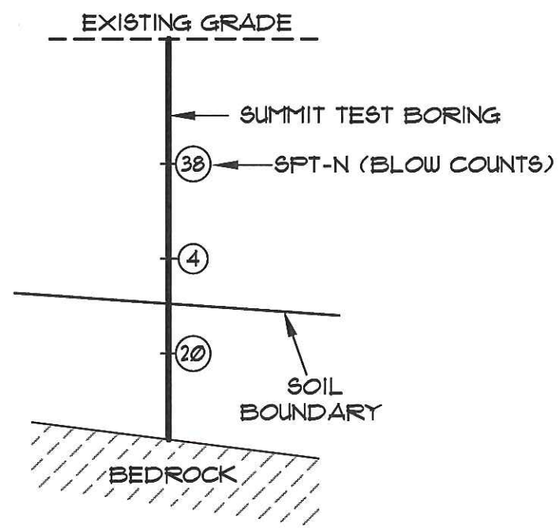




CROSS SECTION B-B

SCALE: HORIZ. - 1" = 20'
VERT. - 1" = 5'

LEGEND



REVISED: APRIL 20, 2015 - CORRECTED SCALE OF CROSS SECTION B-B AND ADDED RED LINES
REVISED: APRIL 6, 2015 - UPDATE LOCATIONS AND ELEVATIONS OF BORINGS AND PROBES

PROJECT:
PROPOSED BUILDING SITE
665 CONGRESS STREET - PORTLAND, MAINE

CLIENT:
REDFERN PROPERTIES

TITLE:
INTERPRETIVE SOIL PROFILES

SCALE: AS NOTED
DRAWN BY: KRF
APPR BY: WAP
DATE: APRIL 2, 2015

SUMMIT
GEOENGINEERING SERVICES
113 PLEASANT STREET
ROCKLAND, ME 04841
Tel.: (207) 316-7161
145 LISBON ST. - SUITE 601
LEWISTON, ME 04240
Tel.: (207) 576-3313

PROJ.#: 15040

FIGURE:
1

NOTES:

1. SNOW MAY BE STORED WITHIN THE SNOW STORAGE AREAS ONLY.

2. SNOW SHALL BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE AS NECESSARY

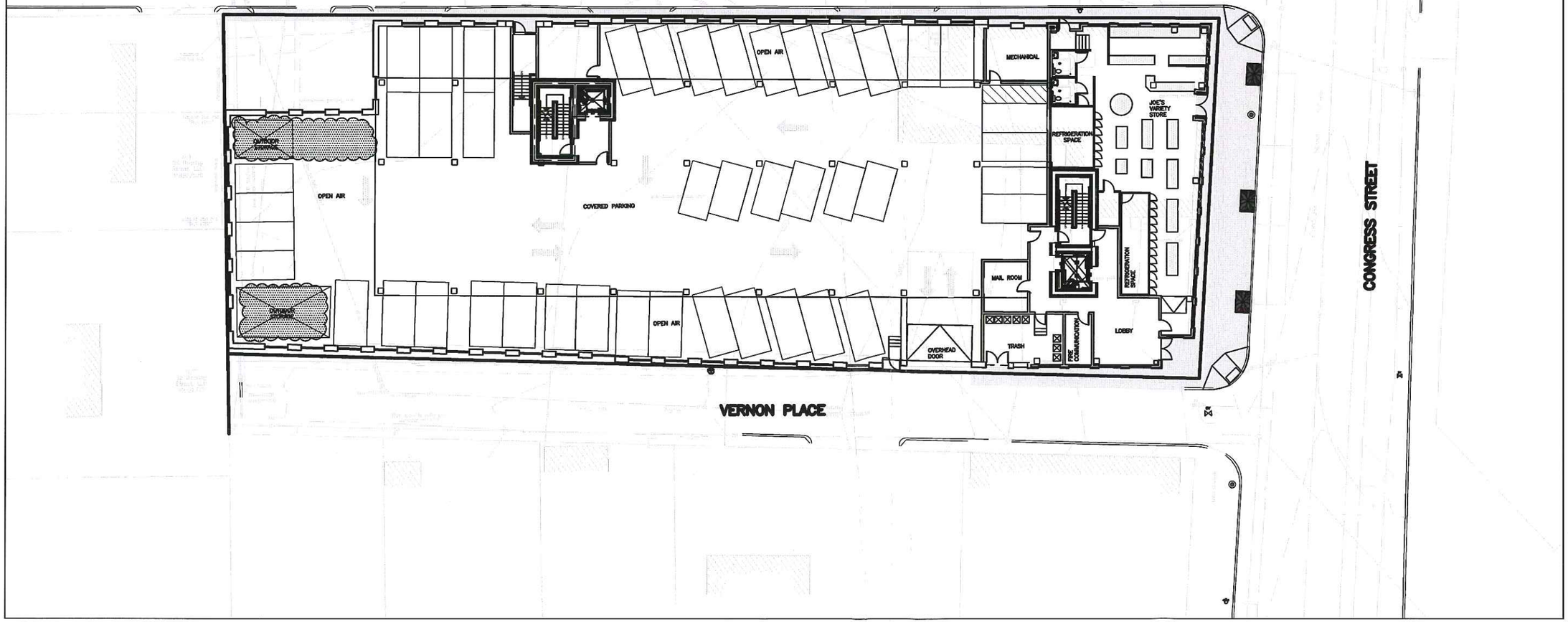
3. SNOW TRANSPORTED OFFSITE SHALL BE BROUGHT TO A MAINE DEP APPROVED "SNOW DUMP" OR MEET THE EXCEPTIONS REQUIREMENTS SPECIFIED WITHIN MAINE DEP CHAPTER 573 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW.

4. THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, PAVERS, HARDSCAPING, CURBING, LIGHTING, FENCING, ETC. RESULTING FROM THEIR ACTIVITIES.

5. THE SNOW CONTRACTOR SHALL USE DE-ICE PRODUCT THAT IS SUITABLE FOR CONCRETE SURFACES.

6. SNOW CONTRACTOR TO ENSURE THAT ALL UTILITIES ARE ACCESSIBLE, INCLUDING BUT NOT LIMITED TO: FIRE HYDRANTS, WATER VALVES, SEWER VALVES, SEWER AND STORMWATER MANHOLE COVERS, STORMWATER CATCH BASIN GRATES, WATER METERS, GAS VALVES AND PULL BOX COVERS.

SNOW STORAGE LOCATION



ISSUED FOR	BY DATE
REVISION	REV. DATE

DRAWING NAME: SNOW STORAGE PLAN

PROJECT NAME: 667 CONGRESS ST. REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC
P.O. BOX 3372
PORTLAND, MAINE 04104
(207) 775-2655

FILE:	1060_CIVIL
DATE:	7/29/15
JN:	1060
SCALE:	1"=20'
DESIGN BY:	WHS
DRAWN BY:	
CHECKED BY:	WHS

DRAWING NO.

SNOW

GENERAL NOTES:

1. ACORN ENGINEERING, INC. SITE PLAN: FIRST FLOOR USED AS A BASE DRAWING. REFER TO ACORN'S DRAWING FOR COMPLETE SITE IMPROVEMENTS

667 Congress Street Apartments
Site Logistic Plan
Portland, ME
(9.11.15)

CONSTRUCTION

Reference the Site Logistics Narrative dated 9.11.15 for additional information.

0 10 20 Feet

MATERIAL/PASSENGER HOISTS

AVON STREET
ONE WAY

EX. CURB TO REMAIN

EX. UTILITY POLE TO REMAIN

Existing Crosswalk

GATE

GATE

EXISTING CURB TO BE REMOVED

DELIVERY/STAGING AREA

PROPOSED NEW VERTICAL GRANITE CURB (TYP.).

PROPOSED PAVEMENT SAWCUT (TYP.)

PROPOSED CURB TIPDOWN (TYP.)

3' foot clearance for the existing Fire Hydrant

PROPOSED SIDEWALK RAMP WITH DETECTABLE PANEL.

DUMPSTER

DUMPSTER

OUTDOOR STORAGE

4 SPACES (9'X18')

OPEN AIR

STAIRWELL & ELEVATOR LOCATION

OPEN AIR

8 SPACES (8.5'X15')

EXISTING BUILDING TO BE DEMOLISHED

2 SPACES (9'X13') BARRIER FREE PARKING SIGN (TYP.)

MECHANICAL

JOE'S VARIETY STORE

EXISTING LAMP POST (JOE'S)

PROPOSED BICYCLE HITCH FOR TWO BICYCLES. CONTRACTOR TO INSTALL PARALLEL TO CONGRESS ST. PER DETAIL

5 SPACES (9'X18')

TANDEM PARKING

PROPOSED FIRST FLOOR SURFACE MOUNT PIPE BOLLARD (TYP.)

PROPOSED PARKING SPACE (TYP.)

PROPOSED ADA PARKING SPACE (TYP.)

1 SPACES (8'X13')

REFRIGERATION SPACE

COVERED PARKING
FIRST FLOOR CONCRETE SURFACE

6 SPACES (8.5'X16')

STAIRWELL AND ELEVATOR LOCATION

CONGRESS STREET

EDGE OF FIRST FLOOR GARAGE (TYP.)

PROPOSED COLUMN, SEE ARCHITECTURAL PLAN (TYP.)

MAIL ROOM

FIRST FLOOR GARAGE DRIVEWAY RAMP LOCATION

9 SPACES (9'X18')

4 SPACES (8.5'X18')

1 SHARED SPACE (8'X15')

REFRIGERATOR SPACE

9'

22'

EXISTING PARKING SPACE (TO REMAIN)

OPEN AIR

TRASH

FIRE COMMUNICATION

LOBBY

PROPOSED RED MAPLE AND 4'X6' TREE GRATE. TYP. OF 3

EX. SIDEWALK TO BE REPLACED

OVERHEAD DOOR

PROPOSED CURB TIPDOWN (TYP.)

PROPOSED SIDEWALK RAMP WITH DETECTABLE PANEL.

PROPOSED CURB TIPDOWN (TYP.)

EX. END OF CURB

EX. 15.22'

GATE

CRANE

PROPERTY BOUNDARY

PROPOSED 16" VERTICAL GRANITE CURB

EX. PAVEMENT EDGE

VERNON PLACE

PROPOSED FIRST FLOOR PARKING GARAGE ENTRANCE

GATE

EX. CURB AND SIDEWALK (TO REMAIN)

LAYDOWN SPACE

PROPOSED OVERHEAD DOOR AND FIRST FLOOR VEHICLE ENTRANCE. REFER TO ARCHITECTS PLANS

Existing Sidewalk 80 ft. to the West

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

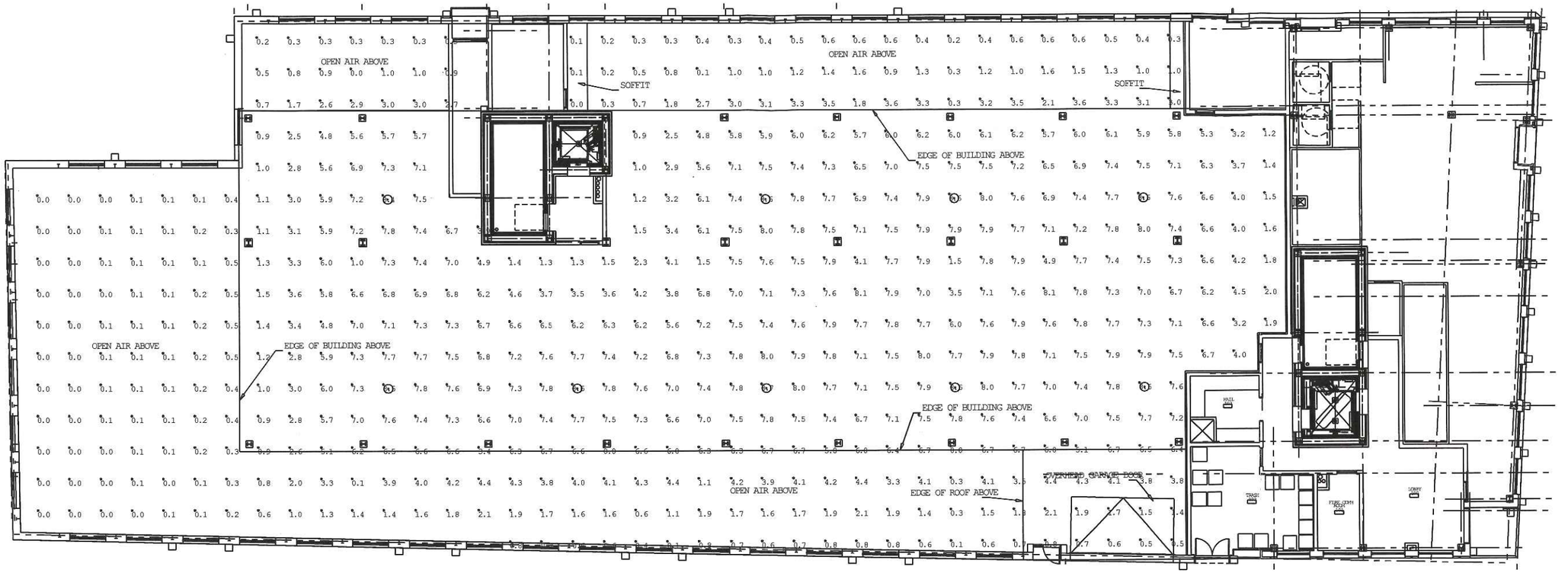
ISSUED FOR	BY DATE
REVISION	REV. DATE

DRAWING NAME: CONSTRUCTION MANAGEMENT PLAN
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

CONSTRUCTION

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	

DRAWING NO.
CMP



JOB NAME: 667 CONGRESS STREET
APEX LIGHTING SOLUTIONS
REFLECTANCES:N/A
WORKPLANE/CALC PLANE: @ FLOOR
CEILING HEIGHT:10'6"

Luminaire Schedule				
Qty	Label	LLF	Description	Lumens/Lamp
9	SL1	0.850	Kenall TekDek TD17-xx-5S-TA-GW-75L-50K7-DCC	N.A.

Calculation Summary					
Label	Avg	Max	Min	Avg/Min	Max/Min
GARAGE CALC @ FLOOR	4.04	8.7	0.0	N.A.	N.A.

GENERAL DISCLAIMER:

Calculations have been performed according to IES standards and good practice Some differences between measured values and calculated results may occur due to tolerances in calculation methods, testing procedures, component performance, measurement techniques and field conditions such as voltage and temperature variations. Input data used to generate the attached calculations such as room dimensions, reflectances, furniture and architectural elements significantly affect the lighting calculations. If the real environment conditions do not match the input data, differences will occur between measured values and calculated values.

* LLF Determined Using Current Published Lamp Data

NOTE TO REVIEWER:

Total Light Loss Factor (LLF) applied at time of design is determined by applying the Lamp Lumen Depreciation (LLD) from current lamp manufacturer's catalog, a Luminaire Dirt Depreciation Factor (LDD) based on IES recommended values and a Ballast Factor (BF) from current ballast specification sheets. Application of an incorrect Light Loss Factor (LLF) will result in forecasts of performance that will not accurately depict actual results.

For proper comparison of photometric layouts, it is essential that you insist all designers use correct Light Loss Factors.

APEX LIGHTING SOLUTIONS
THE ONLY THERE ALL ASSENDING LIES COMPANY
446 SMITH STREET
MIDDLETOWN, CT 06457
TELEPHONE 860.632.8766
FACSIMILIE 860.632.8236
WWW.APEXLTG.COM

PROJECT TITLE:

667 CONGRESS STREET

DRAWING TITLE:

GARAGE LIGHTING
PHOTOMETRIC CALCULATIONS

FILE NAME: 667 GARAGE CALC 9-9-15.DWG

SCALE : 1/8"=1'-0"

DATE: 9/10/15

DRAWN BY: CHV

SHEET:

GL-1

667 CONGRESS STREET REDEVELOPMENT

REDFERN PROPERTIES, LLC
PORTLAND, MAINE

LEGEND:

EXISTING

REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION

PROPOSED

STRIPING
BUILDING (SECOND FLOOR)
BRICK SIDEWALK
GREEN SPACE
EDGE OF PAVEMENT
SEDIMENTATION BARRIER
UNDERDRAIN
CURB
SIGN
LAMP OR LIGHT POLE
UTILITY POLE
GUY WIRE
WATER VALVE
FIRE HYDRANT
SEWER MANHOLE
CATCH BASIN
DRAIN MANHOLE
FIELD INLET
OVERHEAD UTILITY LINE
UNDERGROUND ELECTRIC LINE
UNDERGROUND WATER LINE
MINOR CONTOURS (1FT EX., 0.5FT PROP.)
MAJOR CONTOURS (5FT)
GAS LINE
STORM DRAIN LINE
SEWER LINE
EXISTING/PROPOSED BUILDING
PROPERTY LINE
FOUNDATION DRAIN
ROOF DRAIN

INDEX:

CALL BEFORE YOU DIG
1-888-DIG-SAFE
1-888-344-7233

UTILITIES

SEWER:

PUBLIC SERVICES ENGINEERING DEPARTMENT
55 PORTLAND STREET
PORTLAND, MAINE 04101
CONTACT: DAVID MARGOLIS-PINEO
(207) 874-8850

WATER:

PORTLAND WATER DISTRICT
225 DOUGLAS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: GLISSEN HAVU
(207) 761-8310

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: JAMIE COUGH
(207) 842-2367

TELEPHONE:

FAIRPOINT COMMUNICATIONS
45 FOREST AVE
PORTLAND MAINE 04101
CONTACT: JOHN CAPRIO
(207) 797-1842

CABLE:

TIME WARNER CABLE
118 JOHNSON ROAD
PORTLAND, MAINE, 04102
CONTACT: MARK PELLETIER
(877) 546-0962

NATURAL GAS:

UNITIL SERVICE CORP
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: KELLY FOWLER
(207) 541-2536

PROJECT TEAM

DEVELOPER:

REDFERN PROPERTIES LLC
PORTLAND, MAINE
CONTACT: JONATHAN CULLEY
(207) 776-9715

OWNER'S REPRESENTATIVE:

CORDJIA CAPITAL PROJECTS GROUP
PORTLAND, MAINE
CONTACT: BLAINE M. BUCK, A.I.A., P.E.
(207) 236-9970

ARCHITECT:

RYAN SENATORE ARCHITECTURE
PORTLAND, MAINE
CONTACT: RYAN SENATORE
(207) 650-6414

SURVEYOR:

TITCOMB SURVEY
PORTLAND, MAINE
CONTACT: REX CROTEAU, PLS
(207) 878-7870

GEOTECHNICAL ENGINEER:

SUMMIT GEOENGINEERING SERVICES, INC.
LEWISTON, MAINE
CONTACT: BILL PETERLEIN, PE
(207) 576-3313

STRUCTURAL ENGINEER:

STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC.
PORTLAND, MAINE
CONTACT: AARON JONES, PE
(207) 774-4614

CONSTRUCTION MANAGEMENT CO.:

PC CONSTRUCTION COMPANY
PORTLAND, MAINE
CONTACT: TODD RIORDAN
(802) 651-1239

TRAFFIC ENGINEER:

TRAFFIC SOLUTIONS
PORTLAND, MAINE
CONTACT: BILL BRAY, PE
(207) 774-3603

M.E.P. ENGINEER:

ALLIED ENGINEEERING
PORTLAND, MAINE
CONTACT: IAN MACDONALD, P.E., LEED AP, HCDP
(207) 221-2260

FIRE ENGINEER:

FIRE RISK MANAGEMENT, INC.
BATH, MAINE
CONTACT: MARK CUMMINGS, P.E.
(207) 442-7200

ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CM	CONSTRUCTION MANAGER
CONC.	CONCRETE
CUBIC YARD	CY
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
GAL.	GALVANIZED
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. / DATE

DRAWING NAME: COVER SHEET
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_DETAILS
DATE:	4/16/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11419
9-15-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 4 DAYS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS STAMPED "AS-BUILT".
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY AND TOPOGRAPHIC FROM THE PLAN TITLED EXSTING CONDITIONS SURVEY BY TITCOMB SURVEYING FOR REDFERN PROPERTIES, DATED **MOST RECENT.**
8. SUBSURFACE DATA HAVE BEEN OBTAINED BY SUMMIT GEOENGINEERING SERVICES, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
10. CONSTRUCTION MANAGEMENT PLAN **(TBD)** BY THE PC CONSTRUCTION SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS, AS WELL AS SITE DRAINAGE, SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.
2. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT.
3. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.
4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.
5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
6. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINE ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
7. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
9. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY REDFERN AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, OR ELEVATION AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO THEIR ORIGINAL LOCATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE.
6. CONTRACTOR TO ENSURE THAT DRIVEWAYS AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY LOAM WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. SEE BORING LOGS FOR ADDITIONAL INFORMATION.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT ENTER ONTO SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST GEOTECHNICAL REPORT PREPARED BY THE PROJECT GEOTECHNICAL ENGINEER.
6. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.
7. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.
8. A POST CONSTRUCTION – STORMWATER INSPECTION & MAINTENANCE PLAN IS FILED WITH THE CITY OF PORTLAND.
9. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
10. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
5. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR TO BYPASS EXISTING SEWER FLOW CONTROL AT CONNECTION TO EXISTING SYSTEM AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES.
4. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR-16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.
5. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
6. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
7. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET **C-XX**.
8. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT "WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURES", MOST RECENT REVISION.
9. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
10. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
11. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
13. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.
14. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.
15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.
16. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

DEMOLITION NOTES:

1. THE EXISTING ASPHALT SHOULD BE STRIPPED AND EITHER PROCESSED ONSITE, REMOVED FROM THE SITE OR DISPOSED OF ONSITE.
2. REFER TO THE BORING LOGS OBTAINED BY SUMMIT GEOENGINEERING SERVICES FOR REDFERN PROPERTIES, LLC. FOR ADDITIONAL INFORMATION.
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/27/15
PC PROGRESS SET	WHS 9/21/15
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. / DATE

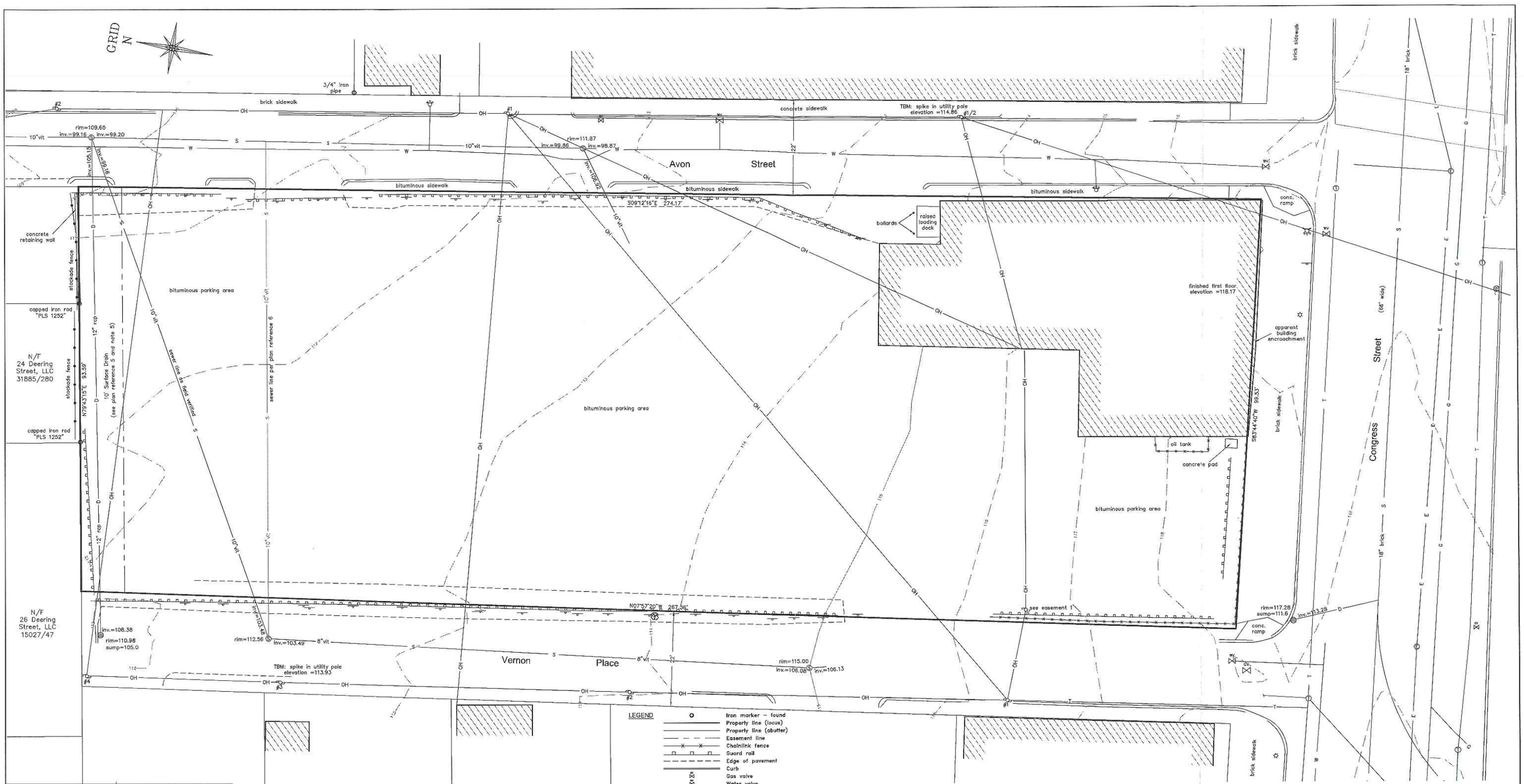
DRAWING NAME: NOTES SHEET
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

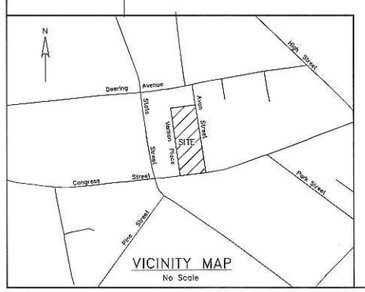
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 772-2655

FILE:	1060_DETAILS
DATE:	4/16/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAC
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11415
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-02





VICINITY MAP
No Scale

NOTES

1) Book and Page references are to the Cumberland County Registry of Deeds.

2) Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

3) Elevations are based on City of Portland datum.

4) Utility information on this plan is approximate, based on location of visible features and information contained on plans and drawings provided by others. DigSafe and/or the appropriate utilities should be contacted prior to any construction.

5) The 10' Surface Drain shown is described in an acceptance by order of the City Council passed November 5, 1951, City of Portland Records, Volume 70, Page 508 and depicted on Plan Reference 5 herein. No recorded deed found, prescriptive rights may exist.

PLAN REFERENCES

1) Plan of Property at Portland made for Saint Stephen Church by H.I. & E.C. Jordan Civil Engineers dated June, 1947.

2) Condominium Plan made for Maryellen Sullivan by Northeast Civil Solutions dated October 20, 2006 recorded in Plan Book 207, Page 390.

3) Condominium Plat Deering Heights Condominiums made for 24 Deering Street, LLC by Owen Haskell, Inc. recorded in Plan Book 215, Page 49.

4) Right of way plans provided by the City of Portland Public Services Engineering Department.

5) City of Portland, Maine Department of Public Works Vernon Place Surface Water Drain dated November 21, 1951, file number 638/14.

6) City of Portland, Maine Department of Public Works Vernon Place New Sewer (Private) dated March 11, 1934, file number 409/56.

LEGEND

- Iron marker – found
- Property line (locus)
- Property line (abutter)
- Easement line
- Chainlink fence
- Guard rail
- Edge of pavement
- Curb
- Gas valve
- Water valve
- Water shutoff
- Fire hydrant
- Sewer manhole
- Telephone manhole
- Electrical manhole
- Catch basin (round)
- Sign
- OH — Overhead utility line
- S — Sewer line
- D — Storm drain
- W — Underground water line
- G — Underground gas line
- E — Underground electric line
- T — Underground telephone line
- Contours (1ft)
- Contours (5ft)
- Lamp or light pole
- Utility pole
- Guy wire
- Deciduous tree
- N/F — Now or formerly of
- 1234/567 — Deed reference (Book/Page)
- Existing building

EASEMENTS / ENCUMBRANCES

1) Overhead utility easement conveyed by Joseph L. Discatio and Mary J. Discatio to Central Maine Power Company and New England Telephone and Telegraph Company recorded in Book 3992, Page 160.

AREA

26,127 square feet / 0.60 acres

CERTIFCATION

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

STATE OF MAINE REX J. CROTEAU #2273 PROFESSIONAL LAND SURVEYOR

Rex J. Croteau, P.L.S. #2273

OWNERS OF RECORD

MSD Properties, LLC
P.O. Box 8816 Portland, Maine
Book 30720, Page 250

PLAN OF
Existing Conditions Survey
665 Congress Street — Portland, Maine

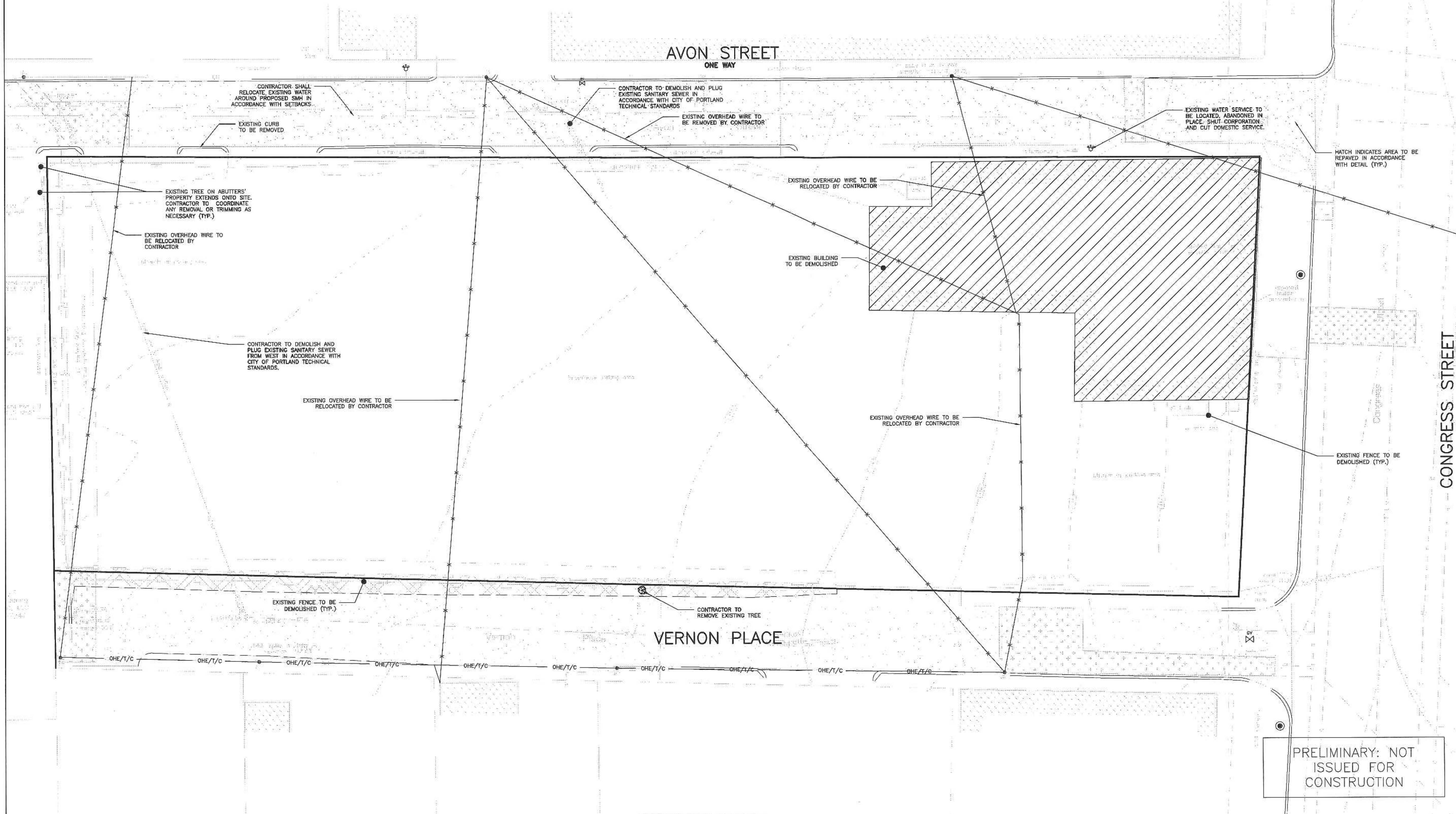
MADE FOR
Redfern Properties
P.O. Box 8816 — Portland, Maine

JOB #215017	DATE: April 6, 2015	SCALE: 1" = 10'
BOOK #810		
215017.dwg		
FILE #9772		

Titcomb Associates
133 Gray Road, Falmouth, Maine 04105
(207)797-9199 www.titcombsurvey.com

DEMOLITION NOTES:

1. THE EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL POTENTIAL BIDDERS SHALL REFER TO THE BORING LOGS OBTAINED BY SUMMIT GEOENGINEERING SERVICES FOR REDFERN PROPERTIES, LLC DATED APRIL 15TH, 2015. FOR ADDITIONAL INFORMATION. A COPY CAN BE MADE AVAILABLE UPON REQUEST.
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. FOR ADDITIONAL ENVIRONMENTAL INFORMATION, REFER TO THE PHASE I ENVIRONMENTAL SITE ASSESSMENT FOR REDFERN PROPERTIES, LLC, 667 CONGRESS STREET DATED 4/24/15. BIDDERS SHALL REVIEW THE PHASE I – ESA PRIOR TO ANY BID OR WORK. A COPY CAN BE MADE AVAILABLE UPON REQUEST.
6. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
7. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.



PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. / DATE

DRAWING NAME: DEMOLITION PLAN

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

A C O R N ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	8/28/15
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11419
9-15-15
LICENSED
PROFESSIONAL ENGINEER

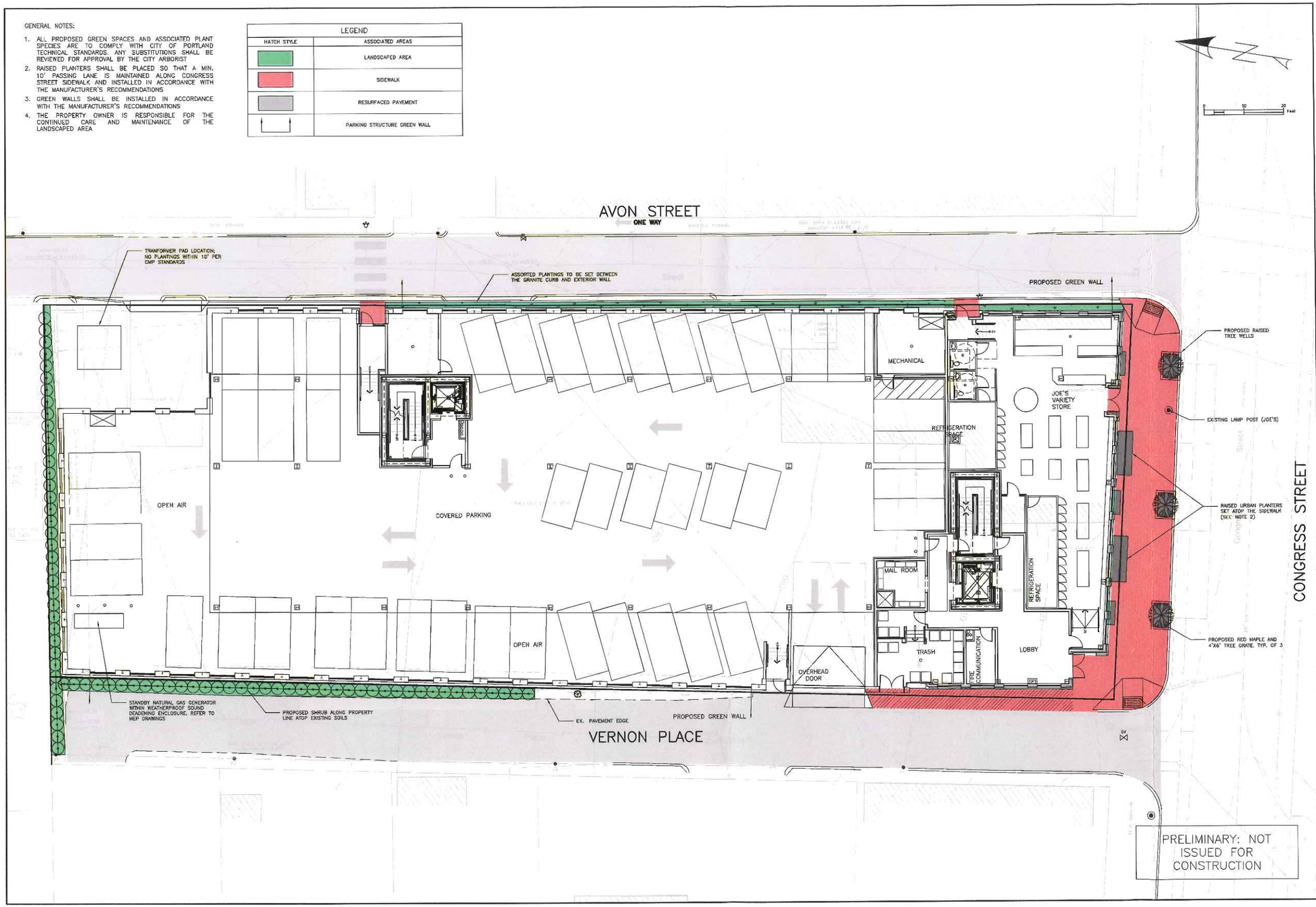
DRAWING NO.

C-03

GENERAL NOTES:

1. ALL PROPOSED GREEN SPACES AND ASSOCIATED PLANT SPECIES ARE TO COMPLY WITH CITY OF PORTLAND TECHNICAL STANDARDS. ANY SUBSTITUTIONS SHALL BE REVIEWED FOR APPROVAL BY THE CITY ARBORIST
2. RAISED PLANTERS SHALL BE PLACED SO THAT A MIN. 10' PASSING LANE IS MAINTAINED ALONG CONGRESS STREET SIDEWALK AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
3. GREEN WALLS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
4. THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUED CARE AND MAINTENANCE OF THE LANDSCAPED AREA

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	LANDSCAPED AREA
	SIDEWALK
	RESURFACED PAVEMENT
	PARKING STRUCTURE GREEN WALL



PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
COMMENT/RESPONSE	WHS	9/15/15

REVISION	REV.	DATE

DRAWING NAME: LANDSCAPE PLAN

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 6616 PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE ALTERED WITHOUT WRITTEN AUTHORIZATION FROM ACORN ENGINEERING, INC. AND IF ALTERED BY OTHERS, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2662

FILE:	1060_CONGRESS
DATE:	9/11/15
J/N:	1060
SCALE:	1"=10'
DESIGNED BY:	DJD
DRAWN BY:	DJD
CHECKED BY:	WHS

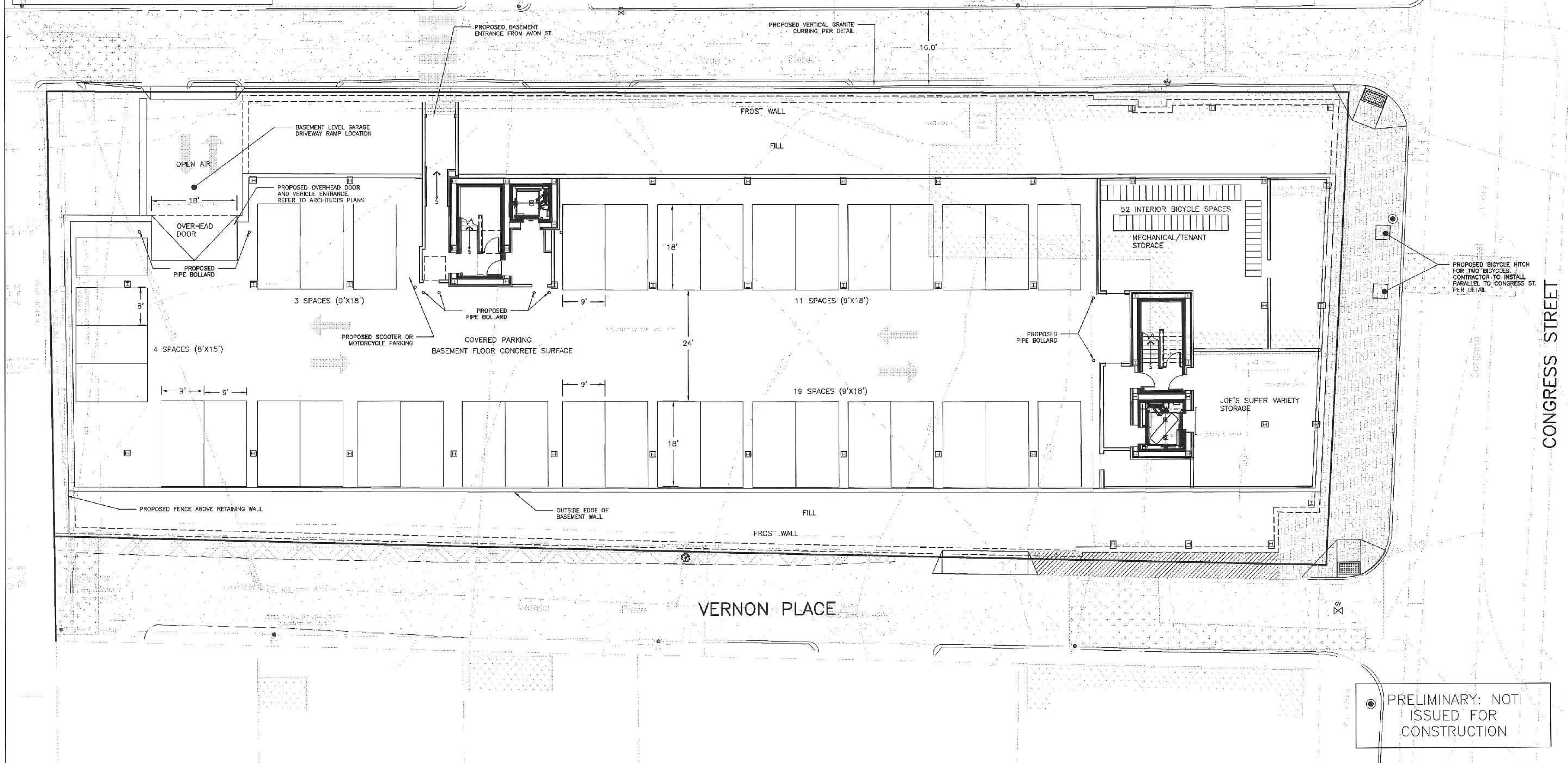
STATE OF MAINE
WILLIAM H SAVAGE
No. 13415
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
L-1

SPACE AND BULK STANDARDS		
ZONE: B3	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	26,126 SF
MINIMUM STREET FRONTAGE	15'	87'
STREET WALL LINE MAX SETBACK	5'	2'
MIN YARD DIMENSIONS	NONE	–
MIN LOT WIDTH	NONE	–
MAX LOT COVERAGE	100%	100%
MAX BLANK FACADE (CONGRESS ONLY)	15'	3'
MAX. BLANK FACADE (VERNON/AVON ONLY)	30'	12'
MAXIMUM BUILDING HEIGHT	85'	85' FROM AVERAGE GRADE
MAXIMUM STREET WALL	65'	65'
MIN BLG HEIGHT WITHIN 50' OF STREET	35'	65'
RES. DENSITY	NO LIMIT	139
PARKING	1/UNIT	*81
MIN. INTERNAL RESIDENT BIKE STORAGE SPACES	2 SPACES/5 D.U. =55.6	56
PAD OVERLAY 75% STREET FACADE	20' DEEP RETAIL	80%

*81 PARKING SPACES INCLUDING 1 SHARED VEHICLE SPACE

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
8X15	4
9X15	–
9X18	33
TOTAL SPACES	37



PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. DATE

DRAWING NAME: SITE PLAN: BASEMENT

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
LICENSED
PROFESSIONAL ENGINEER
9-15-15

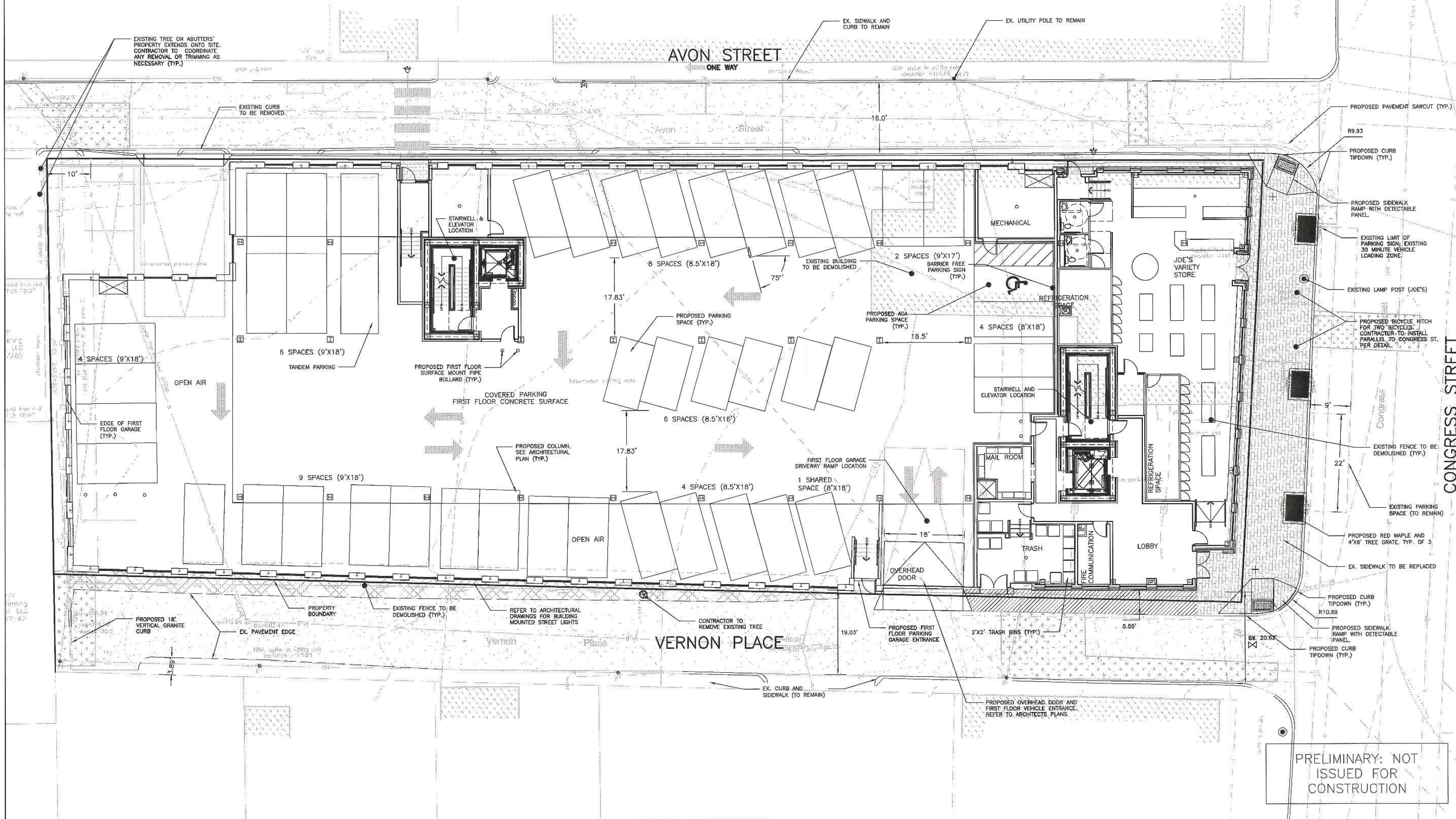
DRAWING NO.
C-10

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
9X17	2
9X18	19
8.5X16	6
8.5X18	12
8X18	5
TOTAL SPACES	44

GENERAL NOTES:

1. 1.25" SURFACE PAVEMENT TO BE REPLACED FOR AVON AND VERNON ADJACENT TO PROJECT, FULL WIDTH OF PROJECT. EXISTING PAVEMENT TO BE MILLED. STRUCTURES WITHIN ROADWAY SHALL BE ADJUSTED AS NECESSARY.
2. ZONING ANALYSIS COMPLETED BY RYAN SENATORE ARCHITECTURE.
3. CONTRACTOR SHALL PLACE NEW CURBING IN LOCATIONS AS NOTED WITHOUT EXISTING CURBING, IN ACCORDANCE WITH DETAIL. EXISTING TIPDOWNS ARE LOCATED AT ALL CURB CUTS. FOR PURPOSES OF BIDDING, CONTRACTOR SHALL NOTE THAT ALL TIPDOWNS SHALL BE RECONSTRUCTED IN ACCORDANCE WITH DETAIL, AND THAT EXISTING TIPDOWNS MAY NOT MEET CITY OF PORTLAND STANDARD.
4. INTERIOR STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING SHALL BE WHITE UNLESS OTHERWISE NOTED.
5. ON-STREET PARKING DELINEATION IS FOR GRAPHIC REPRESENTATION ONLY AND NOT FOR CONSTRUCTION.
6. STAMPED PAVEMENT TO BE DEFINED BY THE CONTRACTOR SO THAT THE SURFACE IS CLEARLY DISTINGUISHED AS A WALKWAY AND SEPARATE FROM THE ADJACENT DRIVEWAY APRON

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	PROPOSED BRICK SIDEWALK
	UTILITY PAVEMENT CUTS
	EXISTING PAVEMENT TO BE RESURFACED (NOTE 1)
	STAMPED PAVEMENT FLUSH SIDEWALK (NOTE 6)
	LOCAL PAVEMENT PROFILE RECONSTRUCTION (TYP.)



ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. / DATE

DRAWING NAME: SITE PLAN: FIRST FLOOR

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

A C O R N ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
9-15-15
LICENSED
PROFESSIONAL ENGINEER

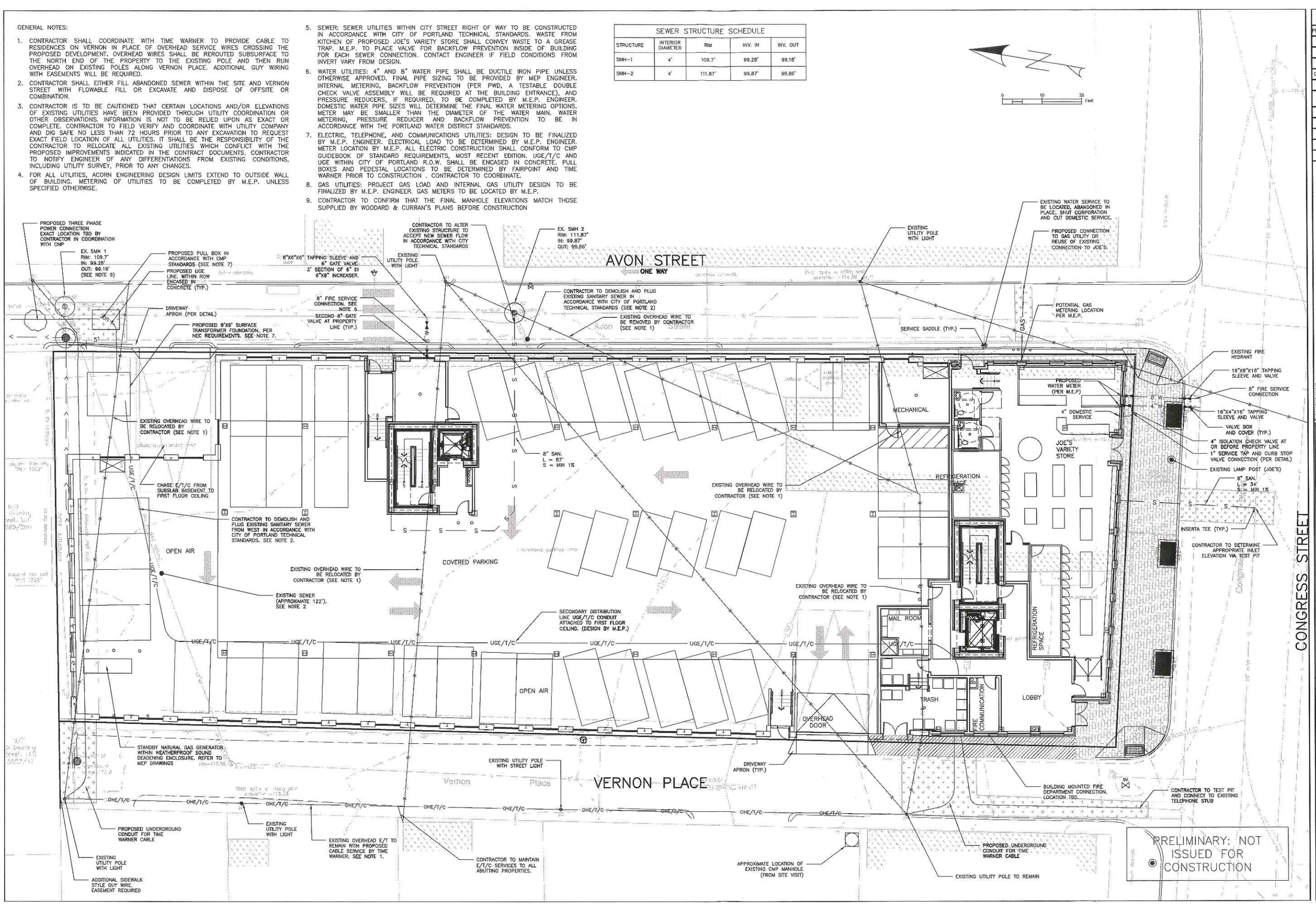
DRAWING NO.

C-11

GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE WITH TIME WARNER TO PROVIDE CABLE TO RESIDENCES ON VERNON IN PLACE OF OVERHEAD SERVICE WIRES CROSSING THE PROPOSED DEVELOPMENT. OVERHEAD WIRES SHALL BE REROUTED SUBSURFACE TO THE NORTH END OF THE PROPERTY TO THE EXISTING POLE AND THEN RUN OVERHEAD ON EXISTING POLES ALONG VERNON PLACE. ADDITIONAL GUY WIRING WITH EASEMENTS WILL BE REQUIRED.
2. CONTRACTOR SHALL EITHER FILL ABANDONED SEWER WITHIN THE SITE AND VERNON STREET WITH FLOWABLE FILL OR EXCAVATE AND DISPOSE OF OFFSITE OR COMBINATION.
3. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY SURVEY, PRIOR TO ANY CHANGES.
4. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS EXTEND TO OUTSIDE WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
5. SEWER: SEWER UTILITIES WITHIN CITY STREET RIGHT OF WAY TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. WASTE FROM KITCHEN OF PROPOSED JOE'S VARIETY STORE SHALL CONVEY WASTE TO A GREASE TRAP. M.E.P. TO PLACE VALVE FOR BACKFLOW PREVENTION INSIDE OF BUILDING FOR EACH SEWER CONNECTION. CONTACT ENGINEER IF FIELD CONDITIONS FROM INVERT VARY FROM DESIGN.
6. WATER UTILITIES: 4" AND 8" WATER PIPE SHALL BE DUCTILE IRON PIPE UNLESS OTHERWISE APPROVED. FINAL PIPE SIZING TO BE PROVIDED BY MEP ENGINEER. INTERNAL METERING, BACKFLOW PREVENTION (PER PWD, A TESTABLE DOUBLE CHECK VALVE ASSEMBLY WILL BE REQUIRED AT THE BUILDING ENTRANCE), AND PRESSURE REDUCERS, IF REQUIRED, TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN THE DIAMETER OF THE WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS.
7. ELECTRIC, TELEPHONE, AND COMMUNICATIONS UTILITIES: DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION BY M.E.P. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. UGE/T/C AND UGE WITHIN CITY OF PORTLAND R.O.W. SHALL BE ENCASED IN CONCRETE. PULL BOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY FAIRPOINT AND TIME WARNER PRIOR TO CONSTRUCTION . CONTRACTOR TO COORDINATE.
8. GAS UTILITIES: PROJECT GAS LOAD AND INTERNAL GAS UTILITY DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. GAS METERS TO BE LOCATED BY M.E.P.
9. CONTRACTOR TO CONFIRM THAT THE FINAL MANHOLE ELEVATIONS MATCH THOSE SUPPLIED BY WOODARD & CURRAN'S PLANS BEFORE CONSTRUCTION

SEWER STRUCTURE SCHEDULE				
STRUCTURE	INTERIOR DIAMETER	RIM	INV. IN	INV. OUT
SMH-1	4'	109.7'	99.28'	99.18'
SMH-2	4'	111.87'	99.87'	99.86'



ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 4/22/15
PRICING	WHS 7/24/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. / DATE

DRAWING NAME: UTILITY PLAN

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.

158 DANFORTH STREET, PORTLAND MAINE 04102 (207) 775-2805

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAC
DRAWN BY:	MAG
CHECKED BY:	WHS

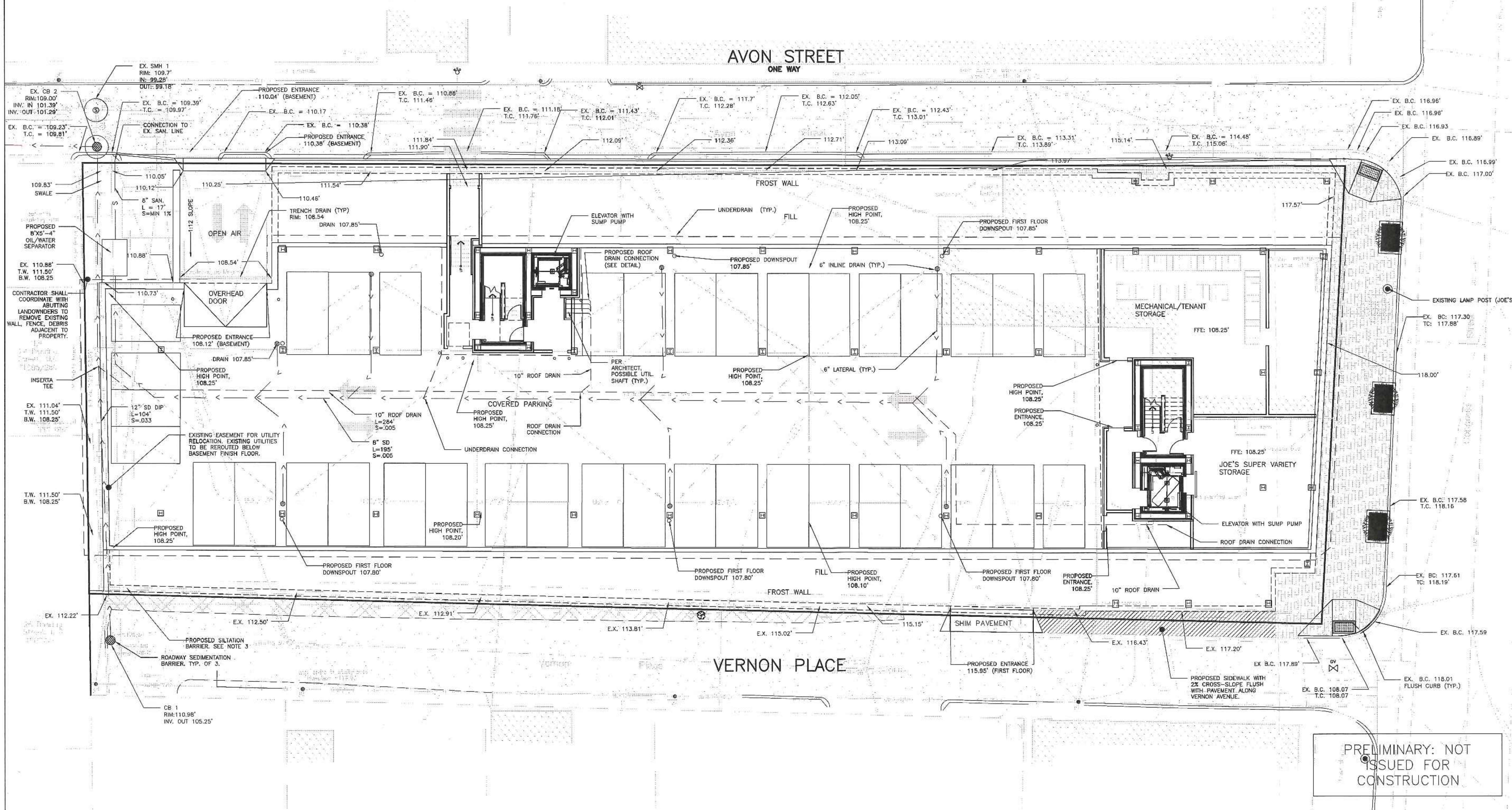
STATE OF MAINE WILLIAM H SAVAGE No. 11419 9-15-15 LICENSED PROFESSIONAL ENGINEER

DRAWING NO. C-20

GENERAL NOTES:

1. REFER TO STRUCTURAL ENGINEER'S PLANS FOR WALL DESIGN. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
2. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
3. LOCATION OF PROPOSED SEDIMENTATION BARRIER IS INDICATED ON PLAN. CONTRACTOR TO ENSURE THAT SEDIMENTATION BARRIER IS INSTALLED ALONG THE DOWN-GRADIENT LOCATION OF DISTURBANCE, PER DETAIL.
4. CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AT ALL LOCATIONS OF INGRESS AND EGRESS DURING CONSTRUCTION TO THE SITE. SEE DETAIL.
5. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. IN INSTANCES WHERE CATCH BASIN HEADSTONES ARE TO BE REPLACED WITH TIPDOWNS, CONTRACTOR SHALL PROVIDE NEW GRANITE CURB TIPDOWN AND OTHER CURBING AS NECESSARY. CATCH BASIN HEADSTONES SHOULD ONLY BE REMOVED IF THEY ARE TO HINDER ADA ACCESS TO CURB RAMPS.
6. CONTRACTOR SHALL INSTALL CATCH BASIN HOOD ON ALL CATCH BASINS.
7. CONTRACTOR SHALL CONFIRM H-20 LOADING AT INDICATED COVER ON PLAN IS FEASIBLE OVER DRAINAGE PIPE PRIOR TO CONSTRUCTION.
8. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
9. REFER TO THE ARCHITECTURAL CROSS SECTION PLANS FOR VERTICAL CLEARANCE WITHIN THE PARKING GARAGE INCLUDING BASEMENT, FIRST FLOOR AND VEHICULAR ENTRANCE RAMPS.
10. ALL PROPOSED DRAINS FROM THE 1ST FLOOR ARE TO BE DUCTILE IRON AND DIRECTLY ATTACHED TO THE SUPPORT COLUMN; THE PIPE CAN BE ATTACHED USING ANY MEANS AND METHODS THAT LEAD THE PIPE ALONG THE COLUMN AVOIDS ANY OBSTACLE INCLUDING PARKING SPACES
11. UNLESS SPECIFIED OTHERWISE EXISTING GRADES SHALL MATCH AT PROPOSED BUILDING FOUNDATION OR RETAINING WALL.
12. UNDERDRAIN INSTALLATION SHALL NOT EXTEND BEYOND THE PROPERTY LINE AS DEPICTED FOR CLARITY. UNDERDRAIN SHALL CONNECT TO THE STORMDRAIN AND BE TRIBUTARY TO THE OIL/WATER SEPARATOR.
13. EXTERIOR PERIMETER PARKING LOT WALL GRADES SHALL VARY UNLESS OTHERWISE NOTED. INTERIOR BASEMENT SLOPES TO MIRROR FIRST FLOOR SLOPES, WITH THE EXCEPTION OF RAMP LOCATIONS.
14. T.C. TOP OF CURB ASSUMES ALL CURBS WILL BE RECONSTRUCTED OR CONSTRUCTED WITH A 7" REVEAL FROM NOTED EXISTING SPOT GRADES.
15. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS
16. CONTRACTOR TO CONFIRM THAT THE FINAL MANHOLE AND CATCHBASIN ELEVATIONS MATCH THOSE SUPPLIED BY WOODARD & CURRAN'S PLANS BEFORE CONSTRUCTION

CATCH BASIN SCHEDULE				
STRUCTURE	INTERIOR DIAMETER	RIM	INV. IN	INV. OUT
CB-1	4'	110.98'	–	105.25'
CB-2	4'	109.00'	101.39'	101.29'



ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. DATE

DRAWING NAME: GRADING & DRAINAGE PLAN: BASEMENT

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.

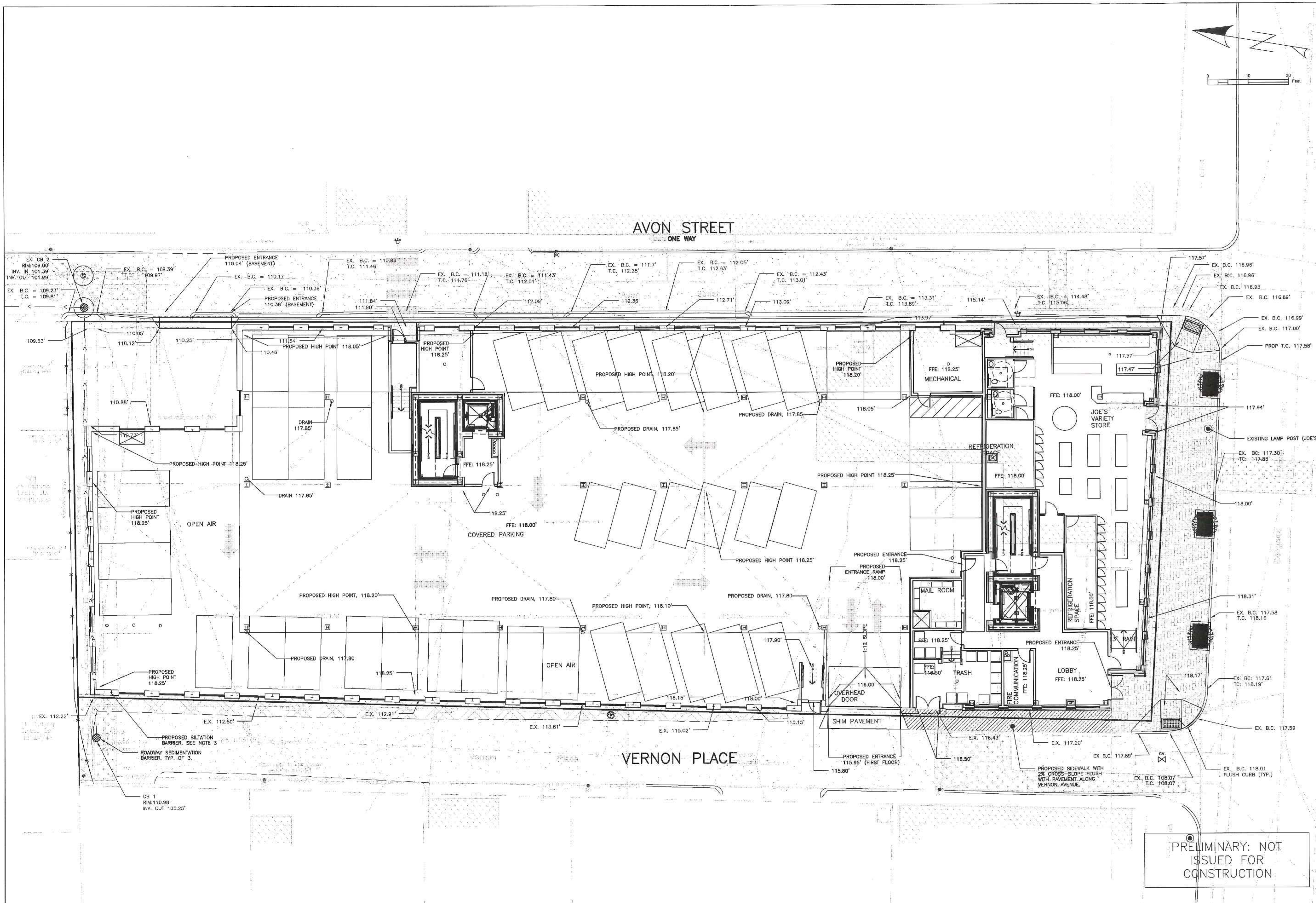
ACORN ENGINEERING, INC. 158 DANFORTH STREET, PORTLAND MAINE 04102 (207) 775-2655

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 9-15-15 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.

C-30



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COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. DATE

DRAWING NAME:
GRADING & DRAINAGE PLAN: FIRST FLOOR

PROJECT NAME:
667 CONGRESS STREET REDEVELOPMENT

CLIENT:
REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

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DESIGNED BY:	MAG
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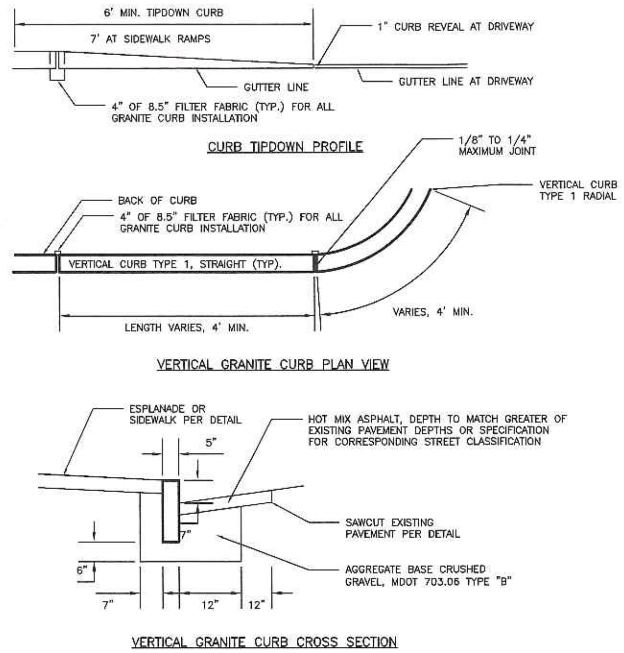
CHECKED BY:	WHS

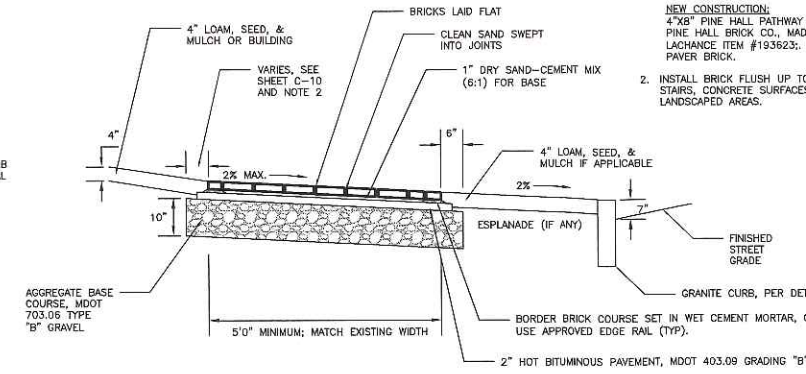
STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
9-15-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-31



VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL

NOT TO SCALE



NOTES:

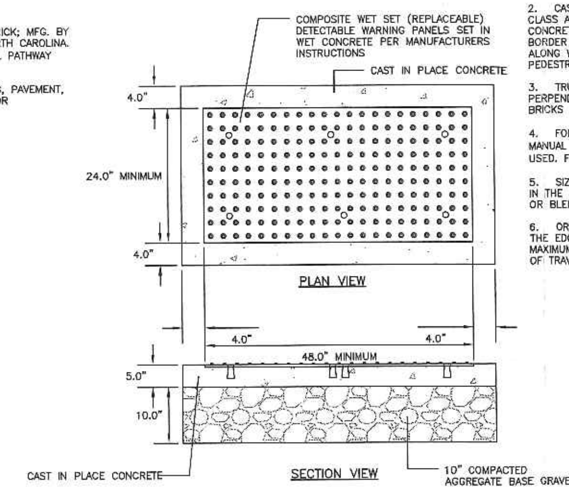
1. BRICKS TO BE USED:

   NEW CONSTRUCTION:
   4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623; PINE HALL PATHWAY PAVER BRICK.

2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.

BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL

NOT TO SCALE



NOTES:

1. COMPOSITE WET SET (REPLACEABLE) DETECTABLE WARNING PANELS SHALL BE AS MANUFACTURED BY ADA SOLUTIONS, INC. (WWW.ADATILE.COM) OR APPROVED EQUAL.

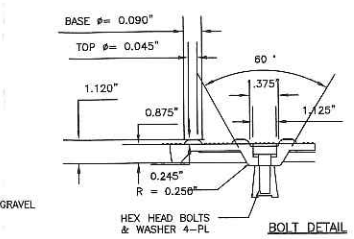
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE CONCRETE SHALL BE SEALED PRIOR TO SETTING PANELS. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE PANEL AND CONCRETE, ALONG WITH A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.

3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.

4. FOR ALL DETECTABLE WARNING PANELS (EXCEPT AS SPECIFIED IN TECHNICAL MANUAL 1.8.4.), FEDERAL DARK GRAY COLORED (#36118) PANEL(S) SHALL BE USED. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.

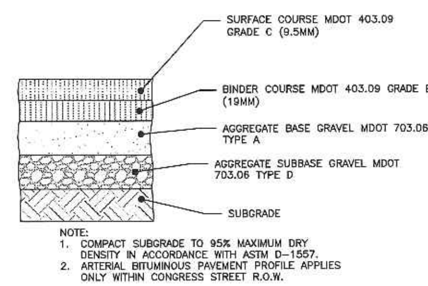
5. SIZE: THE DETECTABLE WARNING PANEL(S) SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.

6. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST TO THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



SIDEWALK RAMP DETECTABLE WARNING PANEL

NOT TO SCALE



NOTE:
1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
2. ARTERIAL BITUMINOUS PAVEMENT PROFILE APPLIES ONLY WITHIN CONGRESS STREET R.O.W.

THICKNESS OF LAYERS

STANDARD	LAYERS
2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
3"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
6"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

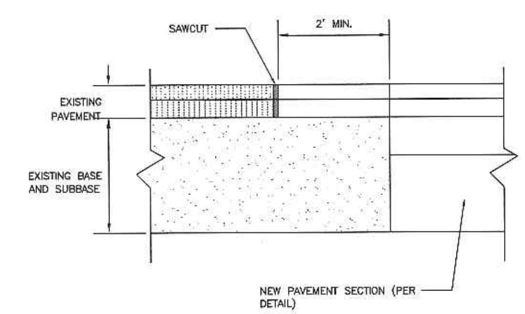
CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT PROFILE

NOT TO SCALE

NOTES:

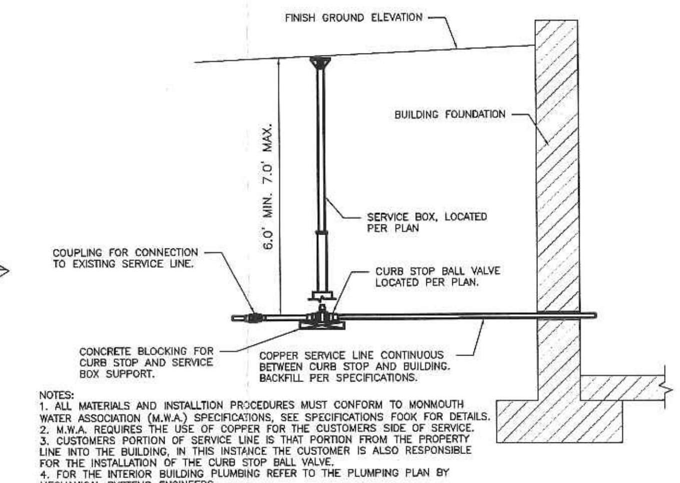
1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.

2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL

NOT TO SCALE



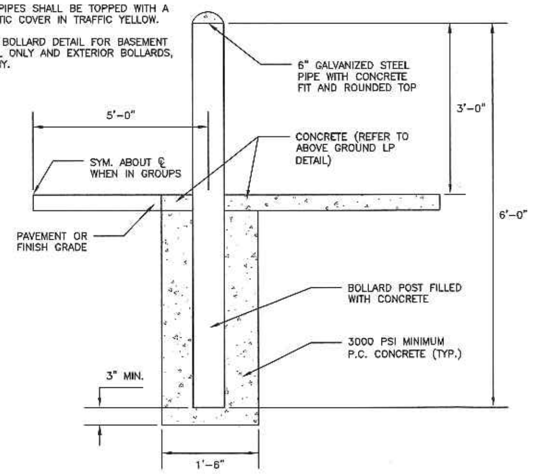
NOTES:
1. ALL MATERIALS AND INSTALLTION PROCEDURES MUST CONFORM TO MONMOUTH WATER ASSOCIATION (M.W.A.) SPECIFICATIONS, SEE SPECIFICATIONS FOOK FOR DETAILS.
2. M.W.A. REQUIRES THE USE OF COPPER FOR THE CUSTOMERS SIDE OF SERVICE.
3. CUSTOMERS PORTION OF SERVICE LINE IS THAT PORTION FROM THE PROPERTY LINE INTO THE BUILDING, IN THIS INSTANCE THE CUSTOMER IS ALSO RESPONSIBLE FOR THE INSTALLATION OF THE CURB STOP BALL VALVE.
4. FOR THE INTERIOR BUILDING PLUMBING REFER TO THE PLUMPING PLAN BY MECHANICAL SYSTEMS ENGINEERS.

SERVICE INSTALLATION DETAIL

NOT TO SCALE

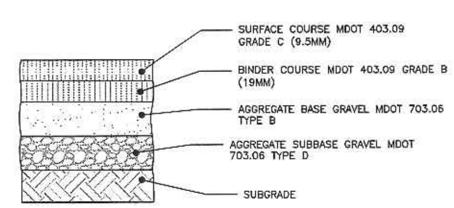
DESIGN NOTE:

1. ALL PIPES SHALL BE TOPPED WITH A PLASTIC COVER IN TRAFFIC YELLOW.
2. PIPE BOLLARD DETAIL FOR BASEMENT LEVEL ONLY AND EXTERIOR BOLLARDS, IF ANY.



BASEMENT PIPE BOLLARD

NOT TO SCALE



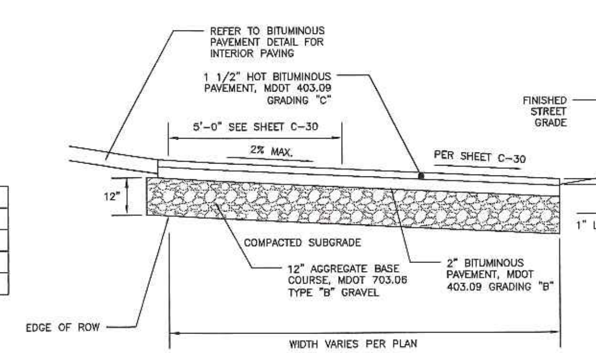
NOTE:
1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557
2. LOCAL BITUMINOUS PAVEMENT PROFILE APPLIES TO LOCATIONS NOT INCLUDED WITHIN CONGRESS STREET R.O.W.

THICKNESS OF LAYERS

STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (9.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

LOCAL BITUMINOUS PAVEMENT PROFILE

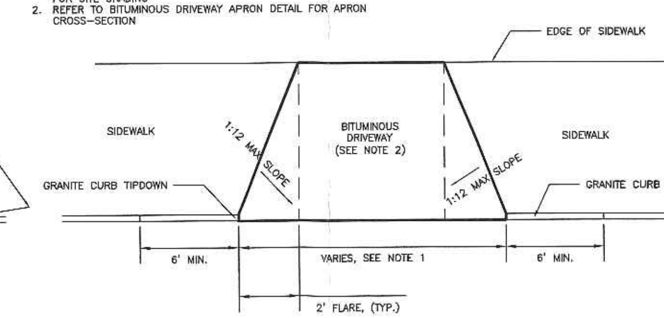
NOT TO SCALE



BITUMINOUS DRIVEWAY APRON DETAIL

NOT TO SCALE

NOTES:
1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR SITE GRADING
2. REFER TO BITUMINOUS DRIVEWAY APRON DETAIL FOR APRON CROSS-SECTION



DRIVEWAY APRON LAYOUT DETAIL

NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. / DATE

DRAWING NAME: SITE DETAILS 1

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

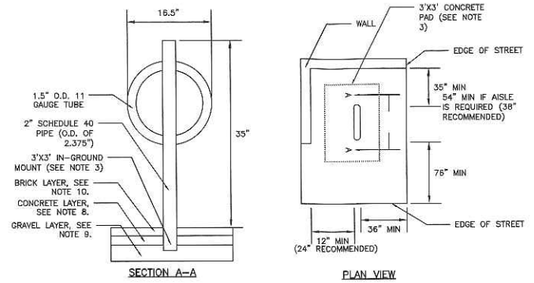
FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11415
9-15-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-40

NOTES:

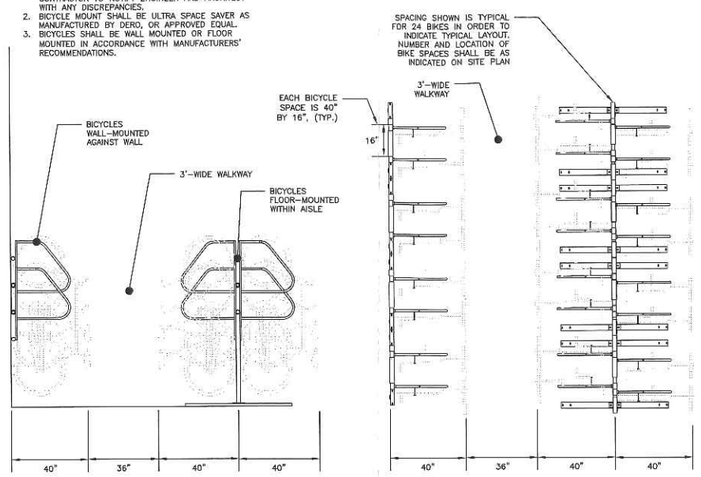
1. BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.
2. BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION.
3. BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH AN IN-GROUND MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.
4. BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 36".
7. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
8. CONCRETE SHALL BE 4000 PSI @28 DAYS. BOTTOM OF CONCRETE SHALL BE AT TOP OF SIDEWALK GRAVEL ELEVATION. DEPTH VARIES APPROX. 4"-7".
9. GRAVEL LAYER SHALL BE INSTALLED IN ACCORDANCE WITH BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL, AND SHALL BE MAINEDOT 703.06 TYPE B.
10. TOP OF BRICK LAYER SHALL BE AT SAME ELEVATION IN ACCORDANCE WITH BRICK SIDEWALK DETAIL.



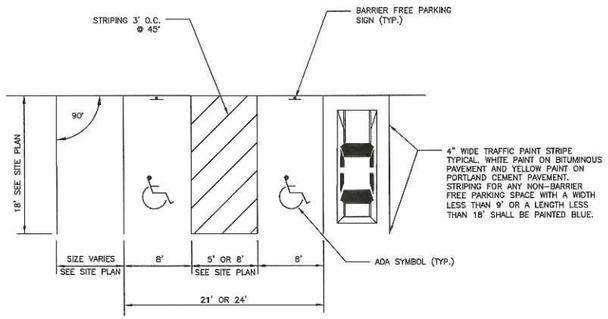
BICYCLE HITCH DETAIL
NOT TO SCALE

NOTES:

1. FINAL LOCATION OF INTERIOR BICYCLE RACKS SHALL CONFORM TO ALL ARCHITECTURAL DRAWINGS. CONTRACTOR TO NOTIFY ENGINEER AND ARCHITECT WITH ANY DISCREPANCIES.
2. BICYCLE MOUNT SHALL BE ULTRA SPACE SAVER AS MANUFACTURED BY DERO, OR APPROVED EQUAL.
3. BICYCLES SHALL BE WALL MOUNTED OR FLOOR MOUNTED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.



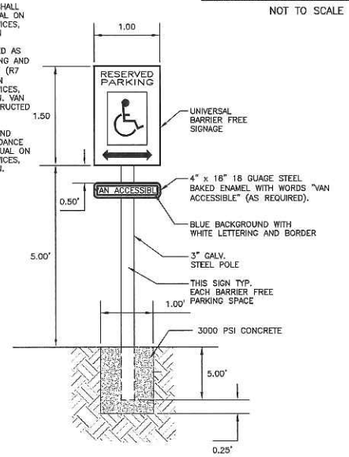
INTERIOR BICYCLE SPACE LAYOUT
NOT TO SCALE



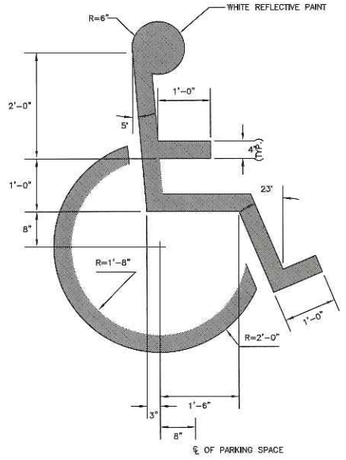
PARKING SPACE DIMENSIONS
NOT TO SCALE

NOTES:

1. ALL ASPECTS OF RESERVED PARKING SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION
2. SIGN SHALL BE CONSTRUCTED AS SIGN R7-8 UNDER THE "PARKING AND STANDING SIGNS AND PLAQUES" (R7 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION. VAN ACCESSIBILITY SHALL BE CONSTRUCTED AS SIGN R7-8a OR R7-8b.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



BARRIER FREE PARKING SIGN
NOT TO SCALE

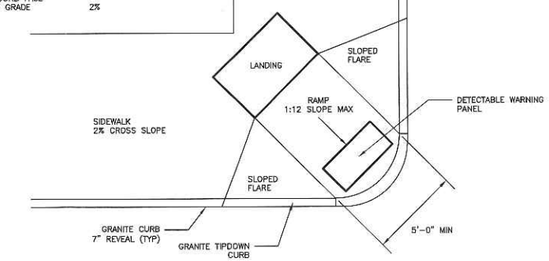


INTERNATIONAL BARRIER FREE SYMBOL
NOT TO SCALE

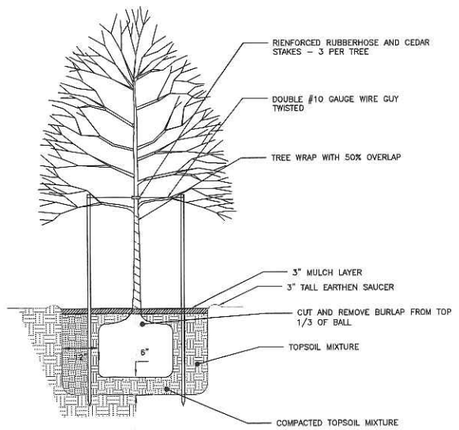
NOTES:

1. ALL RAMPS SHALL COMPLY WITH ADA STANDARDS
2. LANDING AREA MAY BE REQUIRED BASED ON SIDEWALK DIMENSIONS
3. GRANITE CURB ADJACENT TO RAMP SHALL BE FLUSH WITH STREET
4. SIDEWALK MATERIAL SHALL BE PER CITY SIDEWALK MATERNAL POLICY
5. FLARED SECTIONS SHOULD MATCH SURFACE MATERIAL USED FOR SIDEWALK CONSTRUCTION
6. 7'-0" FLARE MINIMUM

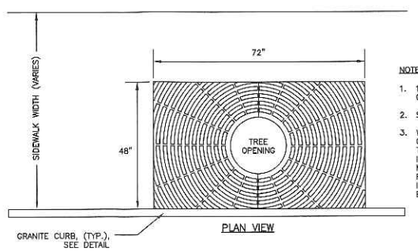
DESIGN ELEMENT	SLOPE IN DIRECTION OF TRAVEL	CROSS SLOPE
APPROACH	MAX 8.33%	2%
LANDING	2%	2%
RAMP	MAX 8.33%	MATCH STREET GRADE
FLARE	MAX 10% AT CURB FACE	—
SIDEWALK	MATCH STREET GRADE	2%



SIDEWALK RAMP WITH DETECTABLE PANEL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE



NOTES:

1. 16" EXPANDABLE TREE OPENING; .375" SLOT OPENINGS.
2. SIDEWALK MATERIAL PER PLAN.
3. WHEN INSTALLED IN A BRICK SIDEWALK, GRATE REQUIRES A FRAME TO BE INSTALLED TO HOLD GRATE IN PLACE. CONTRACTOR TO INSTALL IN ACCORDANCE WITH MANUFACTURERS INSTALLATION PROCEDURES FOR PAVERS. CONTRACTOR TO SUBMIT INSTALLATION PROCEDURES FOR REVIEW FROM ENGINEER PRIOR TO CONSTRUCTION.

EXPANDABLE TREE GRATE NEENAH MODEL R-8811
NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY
	DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/27/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. DATE

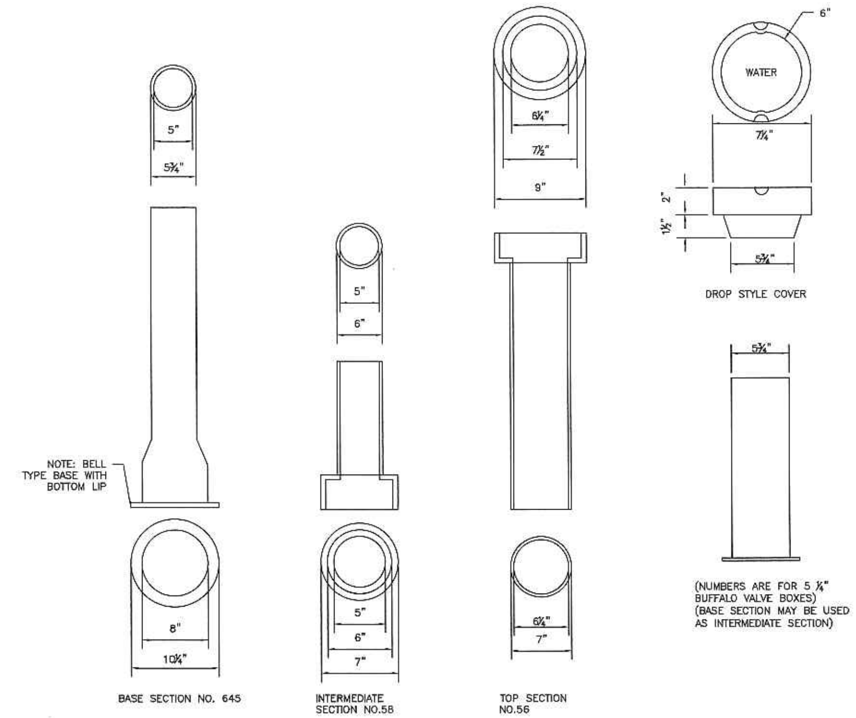
DRAWING NAME: SITE DETAILS 2
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2653

FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

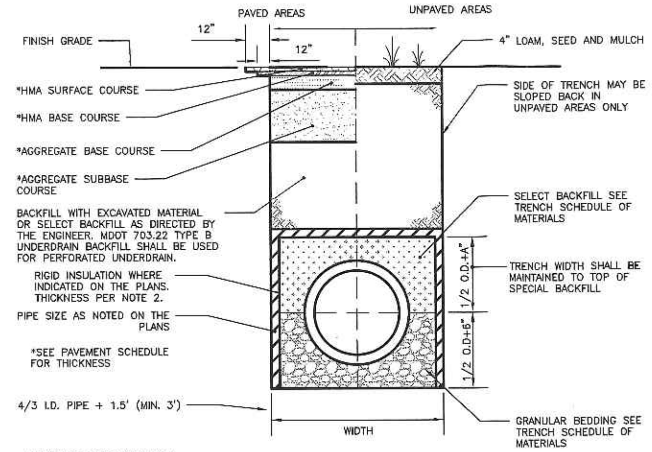
STATE OF MAINE
WILLIAM H. SAVAGE
No. 11418
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-41



VALVE BOX & COVER

N.T.S.



ALLOWABLE PIPE MATERIALS:
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N-12 HP TRIPLE-WALL MIN PS-46 RATING
- ADS SANITITE HP MIN. PS-46

SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

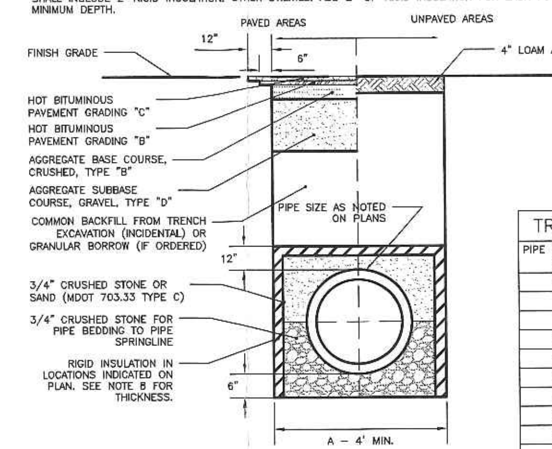
NOTE:
1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   4.1. 2'-0" - STORM DRAIN
   4.2. 5'-0" - SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.

STORM DRAIN AND SEWER TYPICAL TRENCH SECTION

NOT TO SCALE

DESIGN NOTES:

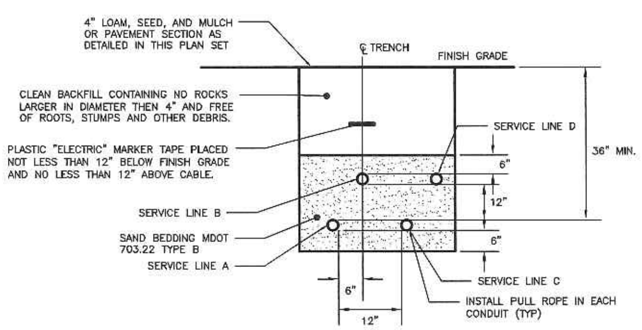
1) ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2) ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II-2.
3) BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4) WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF.SD) SHALL BE ORIENTED UP.
5) ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 - SANITARY SEWER AND STORM DRAIN - PART 2.5.2
6) IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7) THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND ROW. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.



TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	5
15	5
18	5
24	6
36	6
48	7

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE



CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2-5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2-4"	SCHEDULE 40 PVC	COMMUNICATION	-
C	2-4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2-4"	SCHEDULE 40 PVC	CABLE	-

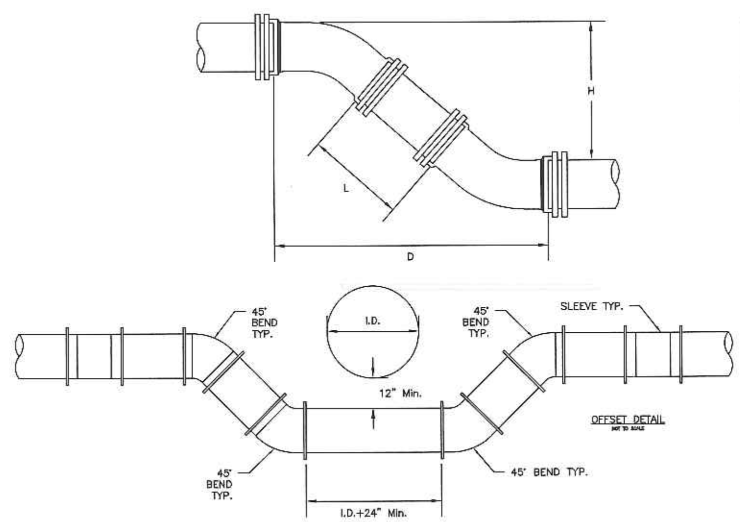
NOTE:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.

2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

UTILITY TRENCH - PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE

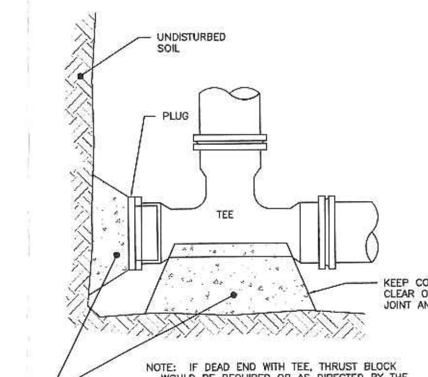


NOTE: DIMENSIONS APPLICABLE FOR SIGMA COMPACT BENDS. FOR TYLER COMPACT BENDS, ADD 1/2" TO "D" DIMENSION AND SUBTRACT 1/2" FROM "L" DIMENSION. FOR OTHER FITTINGS REFER TO MANUFACTURER'S RECOMMENDATIONS.

	6" PIPE		8" PIPE		12" PIPE	
H	D	L	D	L	D	L
12"	1' 6-1/2"	0' 10-1/2"	1' 7-1/2"	0' 9-1/2"	1' 11-1/2"	0' 5-1/2"
13"	1' 7-1/2"	0' 11-7/8"	1' 8-1/2"	0' 10-7/8"	2' 0-1/2"	0' 6-7/8"
14"	1' 8-1/2"	1' 1-5/16"	1' 9-1/2"	1' 0-5/16"	2' 1-1/2"	0' 8-5/16"
15"	1' 9-1/2"	1' 2-11/16"	1' 10-1/2"	1' 1-11/16"	2' 2-1/2"	0' 9-11/16"
16"	1' 10-1/2"	1' 4-1/8"	1' 11-1/2"	1' 3-1/8"	2' 3-1/2"	0' 11-1/8"
17"	1' 11-1/2"	1' 5-9/16"	2' 0-1/2"	1' 4-9/16"	2' 4-1/2"	1' 0-9/16"
18"	2' 0-1/2"	1' 6-15/16"	2' 1-1/2"	1' 5-15/16"	2' 5-1/2"	1' 1-15/16"
19"	2' 1-1/2"	1' 8-3/8"	2' 2-1/2"	1' 7-3/8"	2' 6-1/2"	1' 3-3/8"
20"	2' 2-1/2"	1' 9-13/16"	2' 3-1/2"	1' 8-13/16"	2' 7-1/2"	1' 4-13/16"
21"	2' 3-1/2"	1' 11-3/16"	2' 4-1/2"	1' 10-3/16"	2' 8-1/2"	1' 6-3/16"
22"	2' 4-1/2"	2' 0-5/8"	2' 5-1/2"	1' 11-5/8"	2' 9-1/2"	1' 7-5/8"
23"	2' 5-1/2"	2' 2"	2' 6-1/2"	2' 1"	2' 10-1/2"	1' 9"
24"	2' 6-1/2"	2' 3-7/16"	2' 7-1/2"	2' 2-7/16"	2' 11-1/2"	1' 10-7/16"
25"	2' 7-1/2"	2' 4-7/8"	2' 8-1/2"	2' 3-7/8"	3' 0-1/2"	1' 11-7/8"
26"	2' 8-1/2"	2' 6-1/4"	2' 9-1/2"	2' 5-1/4"	3' 1-1/2"	2' 1-1/4"
27"	2' 9-1/2"	2' 7-11/16"	2' 10-1/2"	2' 6-11/16"	3' 2-1/2"	2' 2-11/16"
28"	2' 10-1/2"	2' 9-1/8"	2' 11-1/2"	2' 8-1/8"	3' 3-1/2"	2' 4-1/8"
29"	2' 11-1/2"	2' 10-1/2"	3' 0-1/2"	2' 9-1/2"	3' 4-1/2"	2' 5-1/2"
30"	3' 0-1/2"	2' 11-15/16"	3' 1-1/2"	2' 10-15/16"	3' 5-1/2"	2' 6-15/16"
31"	3' 1-1/2"	3' 1-5/16"	3' 2-1/2"	3' 0-5/16"	3' 6-1/2"	2' 8-5/16"
32"	3' 2-1/2"	3' 2-3/4"	3' 3-1/2"	3' 1-3/4"	3' 7-1/2"	2' 9-3/4"
33"	3' 3-1/2"	3' 4-3/16"	3' 4-1/2"	3' 3-3/16"	3' 8-1/2"	2' 11-3/16"
34"	3' 4-1/2"	3' 5-9/16"	3' 5-1/2"	3' 4-9/16"	3' 9-1/2"	3' 0-9/16"
35"	3' 5-1/2"	3' 7"	3' 6-1/2"	3' 6"	3' 10-1/2"	3' 2"
36"	3' 6-1/2"	3' 8-7/16"	3' 7-1/2"	3' 7-7/16"	3' 11-1/2"	3' 3-7/16"
37"	3' 7-1/2"	3' 9-13/16"	3' 8-1/2"	3' 8-13/16"	4' 0-1/2"	3' 4-13/16"
38"	3' 8-1/2"	3' 11-1/4"	3' 9-1/2"	3' 10-1/4"	4' 1-1/2"	3' 6-1/4"
39"	3' 9-1/2"	4' 0-11/16"	3' 10-1/2"	3' 11-11/16"	4' 2-1/2"	3' 7-11/16"
40"	3' 10-1/2"	4' 2-1/16"	3' 11-1/2"	4' 1-1/16"	4' 3-1/2"	3' 9-1/16"
41"	3' 11-1/2"	4' 3-1/2"	4' 0-1/2"	4' 2-1/2"	4' 4-1/2"	3' 10-1/2"
42"	4' 0-1/2"	4' 4-7/8"	4' 1-1/2"	4' 3-7/8"	4' 5-1/2"	3' 11-7/8"
43"	4' 1-1/2"	4' 6-5/16"	4' 2-1/2"	4' 5-5/16"	4' 6-1/2"	4' 1-5/16"
44"	4' 2-1/2"	4' 7-3/4"	4' 3-1/2"	4' 6-3/4"	4' 7-1/2"	4' 2-3/4"
45"	4' 3-1/2"	4' 9-1/8"	4' 4-1/2"	4' 8-1/8"	4' 8-1/2"	4' 4-1/8"
46"	4' 4-1/2"	4' 10-9/16"	4' 5-1/2"	4' 9-9/16"	4' 9-1/2"	4' 5-9/16"
47"	4' 5-1/2"	4' 11-15/16"	4' 6-1/2"	4' 10-15/16"	4' 10-1/2"	4' 6-15/16"
48"	4' 6-1/2"	5' 1-3/8"	4' 7-1/2"	5' 0-3/8"	4' 11-1/2"	4' 8-3/8"
49"	4' 7-1/2"	5' 2-13/16"	4' 8-1/2"	5' 1-13/16"	5' 0-1/2"	4' 9-13/16"
50"	4' 8-1/2"	5' 4-3/16"	4' 9-1/2"	5' 3-3/16"	5' 1-1/2"	4' 11-3/16"
51"	4' 9-1/2"	5' 5-5/8"	4' 10-1/2"	5' 4-5/8"	5' 2-1/2"	5' 0-5/8"
52"	4' 10-1/2"	5' 7-1/16"	4' 11-1/2"	5' 6-1/16"	5' 3-1/2"	5' 2-1/16"
53"	4' 11-1/2"	5' 8-7/16"	5' 0-1/2"	5' 7-7/16"	5' 4-1/2"	5' 3-7/16"
54"	5' 0-1/2"	5' 9-7/8"	5' 1-1/2"	5' 8-7/8"	5' 5-1/2"	5' 4-7/8"
55"	5' 1-1/2"	5' 11-5/16"	5' 2-1/2"	5' 10-5/16"	5' 6-1/2"	5' 6-5/16"

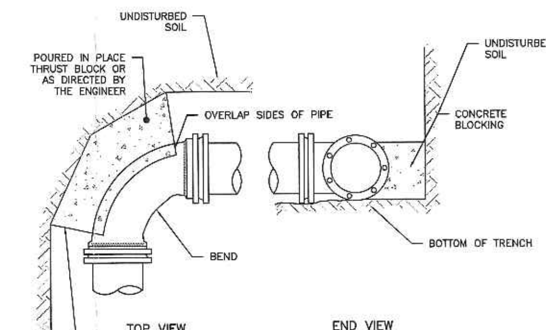
TYPICAL MAIN OFFSET

NOT TO SCALE



NOTE: IF DEAD END WITH TEE, THRUST BLOCK WOULD BE REQUIRED OR AS DIRECTED BY THE ENGINEER

END SECTION



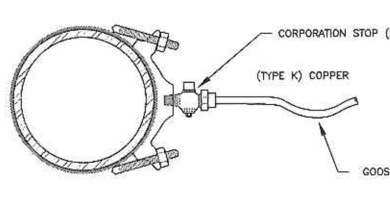
KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS, AND BOLTS

NOTE: SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

REGULAR BEND

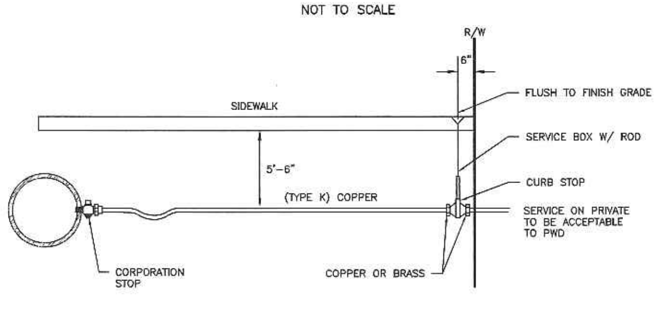
THRUST BLOCKING

NOT TO SCALE



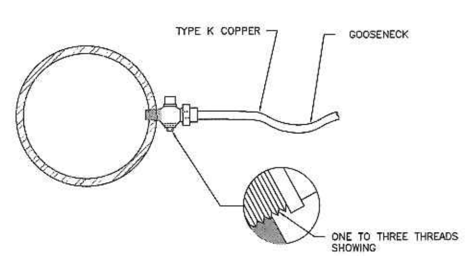
SERVICE SADDLE

(1-1/2" AND 2" C.C. THREAD)



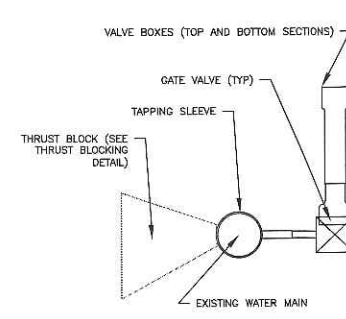
TYPICAL SERVICE CONNECTION

NOT TO SCALE



SERVICE TAP

(3/4" AND 1" C.C. THREAD)
NOT TO SCALE

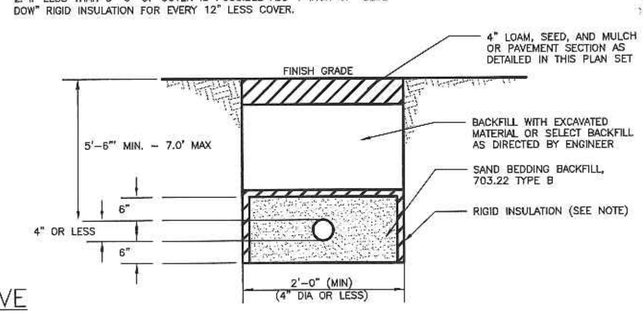


SIDE VIEW

TAPPING SLEEVE AND VALVE

NOT TO SCALE

NOTE:
1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'-6" OF COVER IS POSSIBLE ADD 1 INCH OF "BLUE DOW" RIGID INSULATION FOR EVERY 12" LESS COVER.



WATER SERVICE TRENCH SECTION DETAIL

NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. DATE

DRAWING NAME: UTILITY DETAILS

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

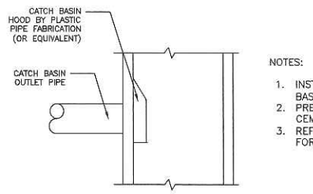
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 9-15-15 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-42

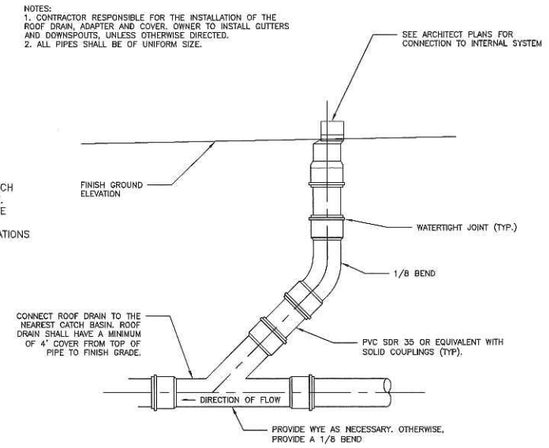


NOTES:

1. INSTALL CATCH BASIN HOODS IN ALL CATCH BASINS WITH A 12" OR 15" OUTLET PIPE.
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS

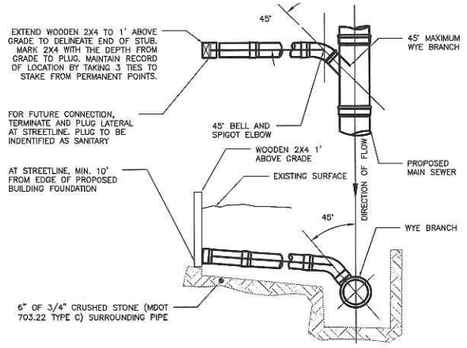
CATCH BASIN HOOD DETAIL
NOT TO SCALE

NOTES:
1. CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE ROOF DRAIN, ADAPTER AND COVER. OWNER TO INSTALL GUTTERS AND DOWNSPOUTS, UNLESS OTHERWISE DIRECTED.
2. ALL PIPES SHALL BE OF UNIFORM SIZE.

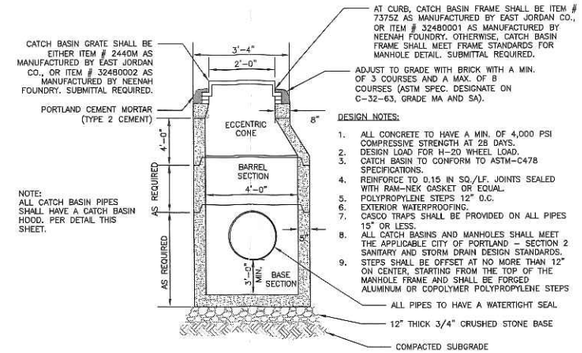


ROOF DRAIN DETAIL
NOT TO SCALE

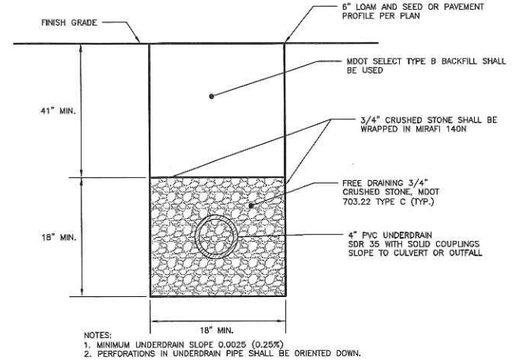
NOTES:
1) LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2) SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3) CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL
NOT TO SCALE

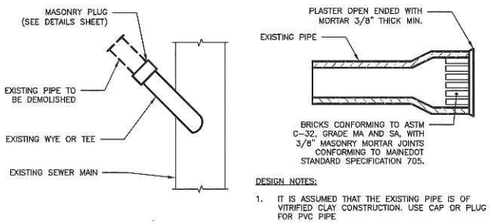


4'-0" DIAMETER PRECAST CATCH BASIN
NOT TO SCALE



NOTES:
1. MINIMUM UNDERDRAIN SLOPE 0.0025 (0.25%)
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.

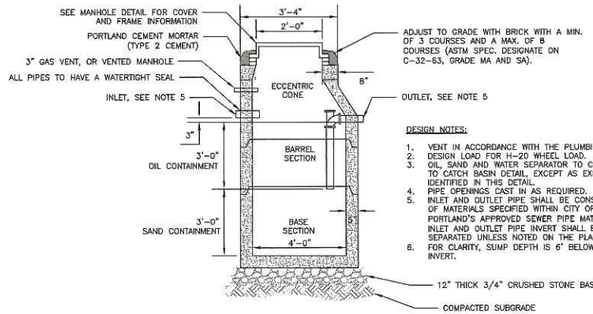
UNDERDRAIN DETAIL
NOT TO SCALE



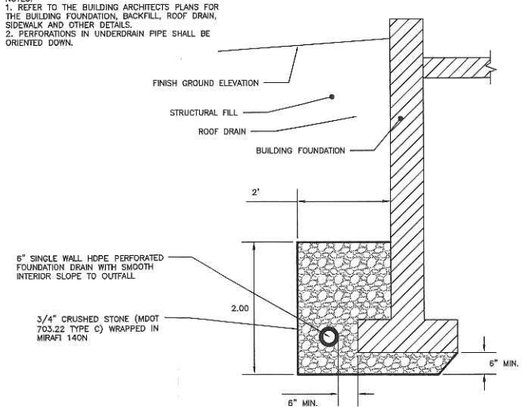
DESIGN NOTES:

1. IT IS ASSUMED THAT THE EXISTING PIPE IS OF VITRIFIED CLAY CONSTRUCTION. USE CAP OR PLUG FOR PVC PIPE

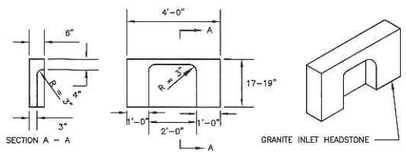
MASONRY PLUG DETAIL
NOT TO SCALE



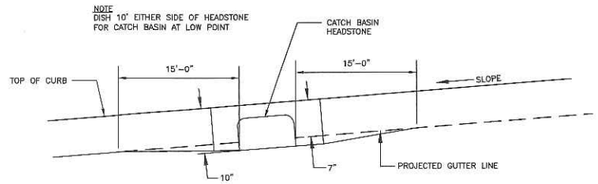
4'-0" DIAMETER PRECAST OIL AND WATER SEPARATOR
NOT TO SCALE



FOUNDATION DRAIN DETAIL
NOT TO SCALE



4' GRANITE HEADSTONE FOR CATCH BASIN INLET
NOT TO SCALE



PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET
NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APPLICATION	WHS 6/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. DATE

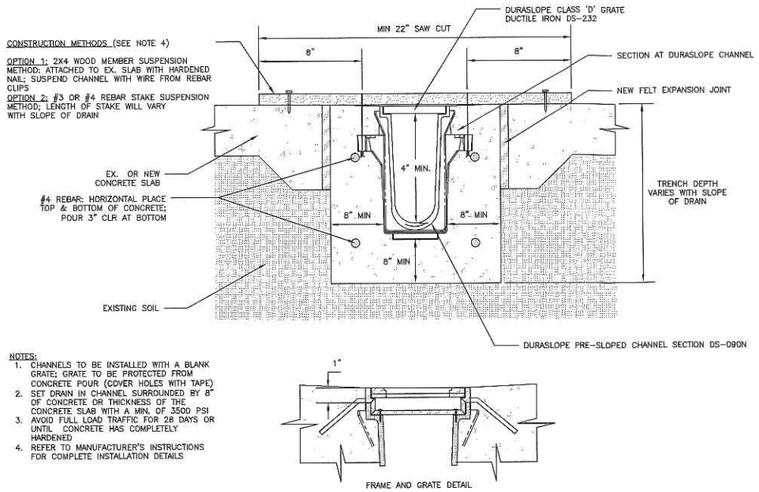
DRAWING NAME: DRAINAGE DETAILS 1
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 6818 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

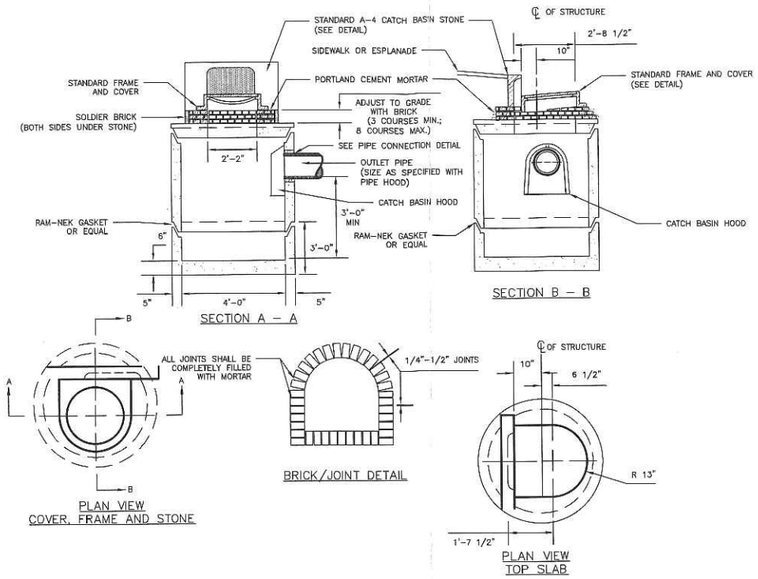
STATE OF MAINE
WILLIAM H. SAVAGE
No. 11415
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-43



DURASLOPE CLASS D TRENCH DRAIN INSTALLATION

NOT TO SCALE

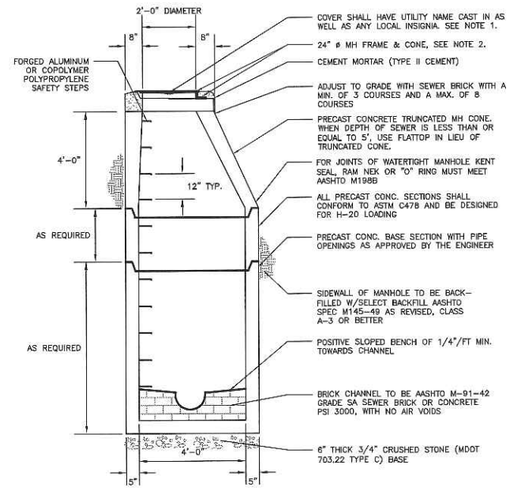


CITY OF PORTLAND PRECAST CONCRETE CATCH BASIN

NOT TO SCALE

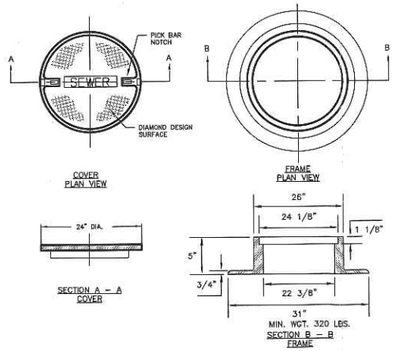
NOTES:

1. MANHOLE COVER FOR SEWER MANHOLE SHALL BE ENGRAVED "SEWER", AND SHALL BE EITHER ITEM # 2180A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960002 AS MANUFACTURED BY NEENAH FOUNDRY. MANHOLE COVER FOR STORM SEWER SHALL BE ENGRAVED "DRAIN", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960003 AS MANUFACTURED BY NEENAH FOUNDRY.
2. MANHOLE FRAME SHALL BE EITHER ITEM # 14960001, AS MANUFACTURED BY NEENAH FOUNDRY, OR ITEM # 1980Z, AS MANUFACTURED BY EAST JORDAN CO.
3. WITHIN CITY OF PORTLAND ROW, STORM DRAIN MANHOLE SHALL CONFORM WITH "STANDARD PRECAST SEWER MANHOLE DETAIL", WITH THE EXCEPTION THAT THE COVER SHALL BE MARKED AS "DRAIN". REFER TO CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 – SANITARY SEWER AND STORM DRAIN, FIGURE II-1
4. SUBMITTAL REQUIRED FOR MANHOLES, MANHOLE FRAMES & MANHOLE COVERS



STANDARD PRECAST SEWER MANHOLE

NOT TO SCALE



NOTES:

1. ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".
2. ALL SANITARY MANHOLE COVERS AND SHALL HAVE "SEWER" CAST INTO THE COVER.
3. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
4. APPROVED MANHOLE FRAMES:
   - 4.1. EAST JORDAN = 1690Z
   - 4.2. NEENAH = R-1496
   - 4.3. OR APPROVED EQUAL
5. APPROVED MANHOLE COVERS
   - 5.1. EAST JORDAN = 2160A
   - 5.2. NEENAH = R-1496
   - 5.3. OR APPROVED EQUAL

CAST IRON MANHOLE COVER AND FRAME

NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY
	DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 9/21/15
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REVISION	REV. DATE

DRAWING NAME: DRAINAGE DETAILS 2
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8818 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2355

FILE:	1060_DETAILS
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DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11415
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-44

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 VERNON PLACE, AVON STREET, AND CONGRESS STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.1 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.

- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% F THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.

- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL RETAINING AND FOUNDATION WALLS TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN AVON.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

TEMPORARY SEEDING PLAN

SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P2O5–K2O) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

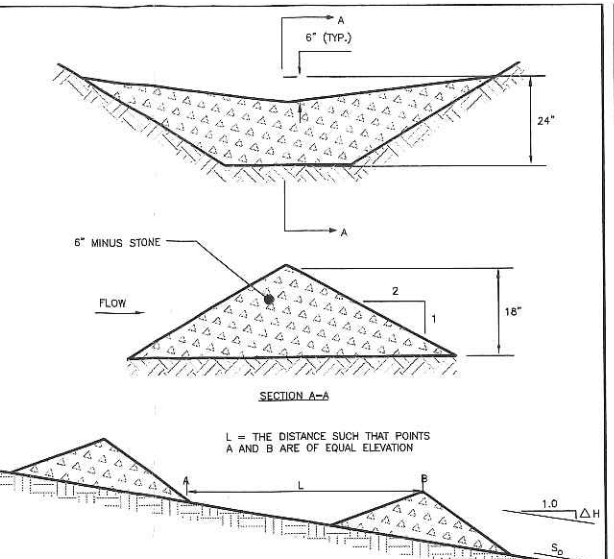
MULCHING

MULCH SHALL BE APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT.

CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION



SPACING BETWEEN CHECK DAMS

S_o (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAM

NOT TO SCALE

NOTES:

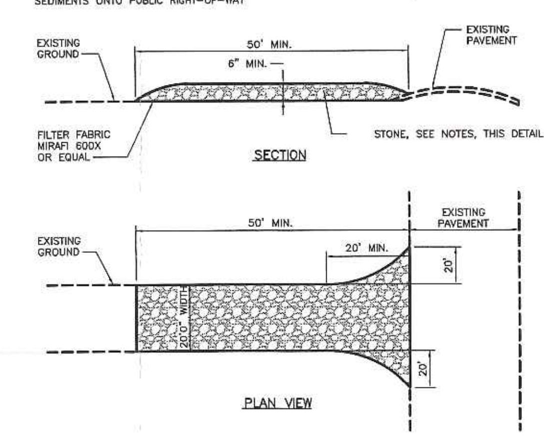
1) CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

2) STONE SHALL BE 2"–3" COARSE AGGREGATE

3) CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.

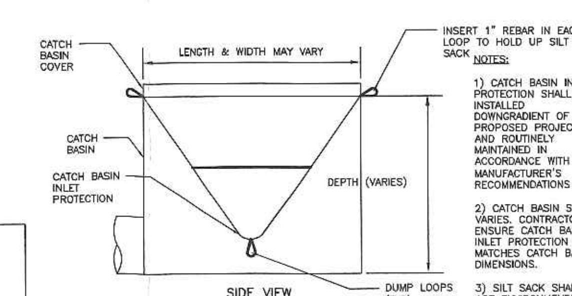
4) WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.

5) CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY



STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:

1) CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

2) CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.

3) SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION

NOT TO SCALE

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. / DATE

DRAWING NAME: EROSION & SEDIMENT CONTROL DETAILS

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

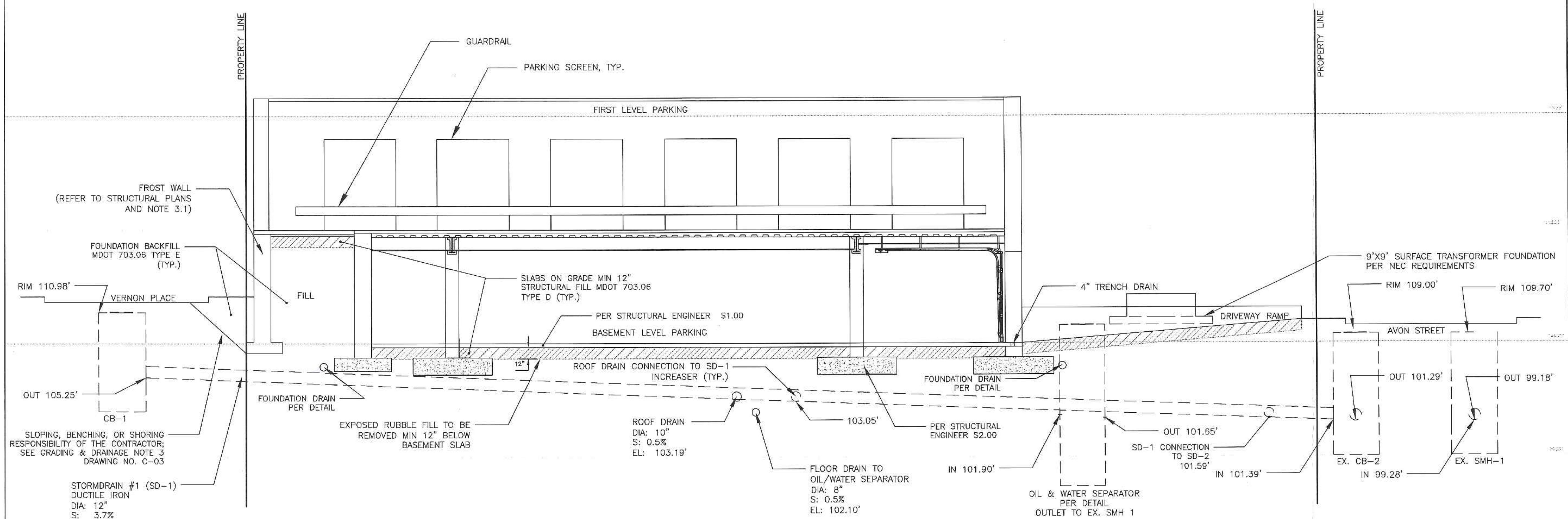
A C O R N ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775–2655

FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11419
9-15-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-45

NOTES:
1. CROSS SECTION FROM RSA A3-5; REFER TO RSA DRAWING FOR ADDITIONAL BUILDING DETAILS
2. ARCHITECTURAL AND STRUCTURAL CROSS-SECTIONS ARE SUBJECT TO CHANGE. CONTRACTOR TO COORDINATE VARIOUS PROFESSIONAL DRAWINGS AND NOTIFY ACORN ENGINEERING ANY CONFLICTS OR DISCREPANCIES.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. DURING THE PRE-CONSTRUCTION PHASE THE CONTRACTOR SHALL NOTIFY THE OWNER SHOULD THEIR MEANS AND METHODS REQUIRE AND EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. GEOTECHNICAL REPORT BY SUMMIT GEOENGINEERING SERVICES DATED MAY 2015 REQUIREMENTS INCLUDE BUT ARE NOT LIMITED TO:
   4.1. ALL FROST WALLS SHALL EXTEND MIN 4' BELOW FINAL BASEMENT FLOOR GRADE UNLESS BEDROCK IS DETECTED THEN MIN 2' IS ACCEPTABLE; ACTUAL DEPTH TO BE DETERMINED BY STRUCTURAL ENGINEER
   4.2. EXPOSED, LOAD-BEARING NATIVE SOIL IS TO BE PROOFROLLED WITH A MIN 2 PASSES WITH A 5-TON VIBRATORY ROLLER IN 2 PERPENDICULAR DIRECTIONS
   4.3. EXPOSED, LOAD-BEARING BEDROCK IS TO BE CLEARED OF LOOSE AND WEATHERED ROCK
   4.4. EXPOSED RUBBLE FILL BELOW FOOTINGS IS TO BE REMOVED DOWN TO THE NATIVE GLACIAL TILL SOIL AND OUTWARDS EQUAL TO A DISTANCE OF THE FOOTING WIDTH
   4.5. VOIDS IN RUBBLE FILL ARE TO BE FILLED WITH ¾" CRUSHED STONE OR AN APPROVED ALTERNATIVE
   4.6. ROCK ANCHORS SHALL BE INSTALLED PER REPORT IF ADDITIONAL FOUNDATION UPLIFT CAPACITY IS NEEDED
   4.7. SLAB SUBGRADE TO BE OBSERVED BY SGS CONTRACTOR TO COORDINATE



CIVIL CROSS SECTION A3-5

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. DATE

DRAWING NAME: CROSS SECTION-1

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.

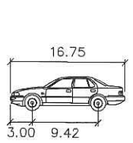
ACORN ENGINEERING, INC. 158 DANFORTH STREET PORTLAND, MAINE 04102 (207) 775-2655

FILE:	1060_DETAILS
DATE:	8/21/15
JN:	1060
SCALE:	1:50
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11415 9-15-15 LICENSED PROFESSIONAL ENGINEER

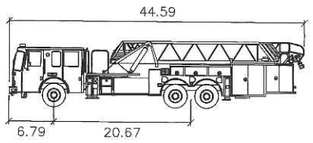
DRAWING NO.

C-50



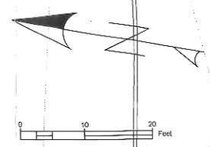
Composite Passenger Vehicle

Width	: 6.33
Track	: 6.33
Lock to Lock Time	: 6.0
Steering Angle	: 26.4



Smeal Aerial MM 100ft

	feet
Width	: 8.17
Track	: 7.75
Lock to Lock Time	: 6.0
Steering Angle	: 45.0



AVON STREET
ONE WAY

Composite Passenger Vehicle
ARCHITECTURAL

Smeal Aerial MM 100ft
TSEXT – Emergency

CONGRESS STREET
Emergency

VERNON PLACE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY
COMMENT/RESPONSE	DATE
	WHS 9/15/15

REVISION	REV.	DATE

DRAWING NAME: CIRCULATION PLAN: BASEMENT

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

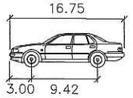
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2605

FILE:	1060_CONGRESS
DATE:	9/15/15
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11418
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
SK1



Composite Passenger Vehicle

Width	: 6.33
Track	: 6.33
Lock to Lock Time	: 6.0
Steering Angle	: 26.4

AVON STREET
ONE WAY

CONGRESS STREET

VERNON PLACE

Composite Passenger Vehicle
ARCHITECTURAL

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

0 10 20 Feet

ISSUED FOR	BY
COMMENT/RESPONSE	DATE
	WHS
	9/15/15

REVISION	REV.
	DATE

DRAWING NAME: CIRCULATION PLAN: FIRST FLOOR

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
ENGINEERING
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2605

FILE:	1060_CONGRESS
DATE:	9/15/15
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

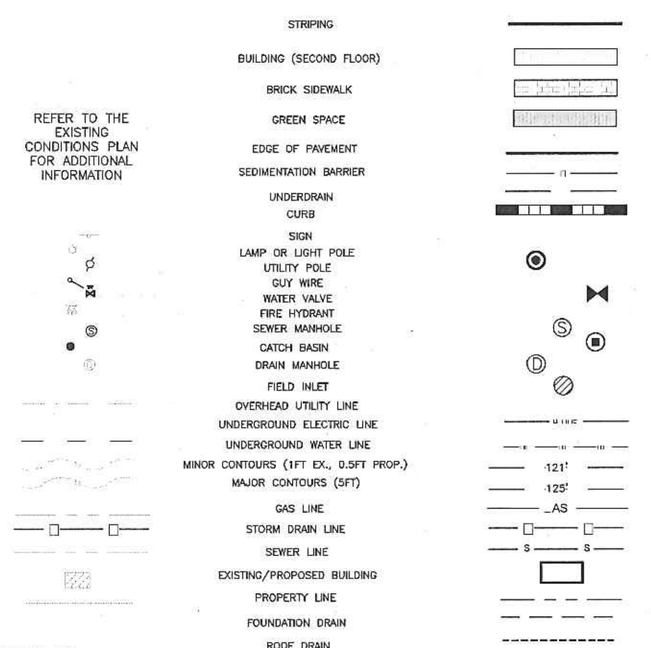
STATE OF MAINE
WILLIAM H SAVAGE
No. 11418
9-15-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
SK2

Plan 1

REDFERN PROPERTIES, LLC
PORTLAND, MAINE

LEGEND:



INDEX:

CALL BEFORE YOU DIG
1-888-DIG-SAFE
1-888-344-7233

UTILITIES

SEWER:

PUBLIC SERVICES ENGINEERING DEPARTMENT
55 PORTLAND STREET
PORTLAND, MAINE 04101
CONTACT: DAVID MARGOLIS-PINEO
(207) 874-8850

WATER:

PORTLAND WATER DISTRICT
225 DOUGLAS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: GLISSEN HAVU
(207) 761-8310

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: JAMIE COUGH
(207) 842-2367

TELEPHONE:

FAIRPOINT COMMUNICATIONS
45 FOREST AVE
PORTLAND MAINE 04101
CONTACT: JOHN CAPRIO
(207) 797-1842

CABLE:

TIME WARNER CABLE
118 JOHNSON ROAD
PORTLAND, MAINE, 04102
CONTACT: MARK PELLETIER
(877) 546-0962

NATURAL GAS:

UNITIL SERVICE CORP
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: KELLY FOWLER
(207) 541-2536

PROJECT TEAM

DEVELOPER:

REDFERN PROPERTIES LLC
PORTLAND, MAINE
CONTACT: JONATHAN CULLEY
(207) 776-9715

OWNER'S REPRESENTATIVE:

CORDJIA CAPITAL PROJECTS GROUP
PORTLAND, MAINE
CONTACT: BLAINE M. BUCK, A.I.A., P.E.
(207) 236-9970

ARCHITECT:

RYAN SENATORE ARCHITECTURE
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SURVEYOR:

TITCOMB SURVEY
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CONTACT: REX CROTEAU, PLS
(207) 878-7870

GEOTECHNICAL ENGINEER:

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LEWISTON, MAINE
CONTACT: BILL PETERLEIN, PE
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STRUCTURAL ENGINEER:

STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC.
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CONTACT: AARON JONES, PE
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CONSTRUCTION MANAGEMENT CO.:

PC CONSTRUCTION COMPANY
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CONTACT: TODD RIORDAN
(802) 651-1239

TRAFFIC ENGINEER:

TRAFFIC SOLUTIONS
PORTLAND, MAINE
CONTACT: BILL BRAY, PE
(207) 774-3603

M.E.P. ENGINEER:

ALLIED ENGINEEERING
PORTLAND, MAINE
CONTACT: IAN MACDONALD, P.E., LEED AP, HCDP
(207) 221-2260

FIRE ENGINEER:

FIRE RISK MANAGEMENT, INC.
BATH, MAINE
CONTACT: MARK CUMMINGS, P.E.
(207) 442-7200

ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION	
APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CM	CONSTRUCTION MANAGER
CONC.	CONCRETE
CUBIC YARD	CY
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
GAL.	GALVANIZED
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. / DATE

DRAWING NAME: COVER SHEET

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_DETAILS
DATE:	4/16/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11419
9-15-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-01

Plan 2

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 4 DAYS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS STAMPED "AS-BUILT".
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY AND TOPOGRAPHIC FROM THE PLAN TITLED EXSTING CONDITIONS SURVEY BY TITCOMB SURVEYING FOR REDFERN PROPERTIES, DATED **MOST RECENT.**
8. SUBSURFACE DATA HAVE BEEN OBTAINED BY SUMMIT GEOENGINEERING SERVICES, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
10. CONSTRUCTION MANAGEMENT PLAN **(TBD)** BY THE PC CONSTRUCTION SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS, AS WELL AS SITE DRAINAGE, SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.
2. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT.
3. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.
4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.
5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
6. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINE ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
7. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
9. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY REDFERN AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, OR ELEVATION AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO THEIR ORIGINAL LOCATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE.
6. CONTRACTOR TO ENSURE THAT DRIVEWAYS AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY LOAM WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. SEE BORING LOGS FOR ADDITIONAL INFORMATION.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST GEOTECHNICAL REPORT PREPARED BY THE PROJECT GEOTECHNICAL ENGINEER.
6. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.
7. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.
8. A POST CONSTRUCTION – STORMWATER INSPECTION & MAINTENANCE PLAN IS FILED WITH THE CITY OF PORTLAND.
9. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
10. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
5. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR TO BYPASS EXISTING SEWER FLOW CONTROL AT CONNECTION TO EXISTING SYSTEM AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES.
4. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR-16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.
5. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
6. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
7. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET **C-XX.**
8. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT "WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURES", MOST RECENT REVISION.
9. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
10. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
11. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
13. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.
14. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.
15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.
16. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

DEMOLITION NOTES:

1. THE EXISTING ASPHALT SHOULD BE STRIPPED AND EITHER PROCESSED ONSITE, REMOVED FROM THE SITE OR DISPOSED OF ONSITE.
2. REFER TO THE BORING LOGS OBTAINED BY SUMMIT GEOENGINEERING SERVICES FOR REDFERN PROPERTIES, LLC. FOR ADDITIONAL INFORMATION.
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APPLICATION	WHS	7/30/15
PC DD SET	WHS	8/7/15
PC PROGRESS SET	WHS	9/23/15
COMMENT/RESPONSE	WHS	9/15/15
REVISION	REV.	DATE

DRAWING NAME: NOTES SHEET
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 6815 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_DETAILS
DATE:	4/16/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

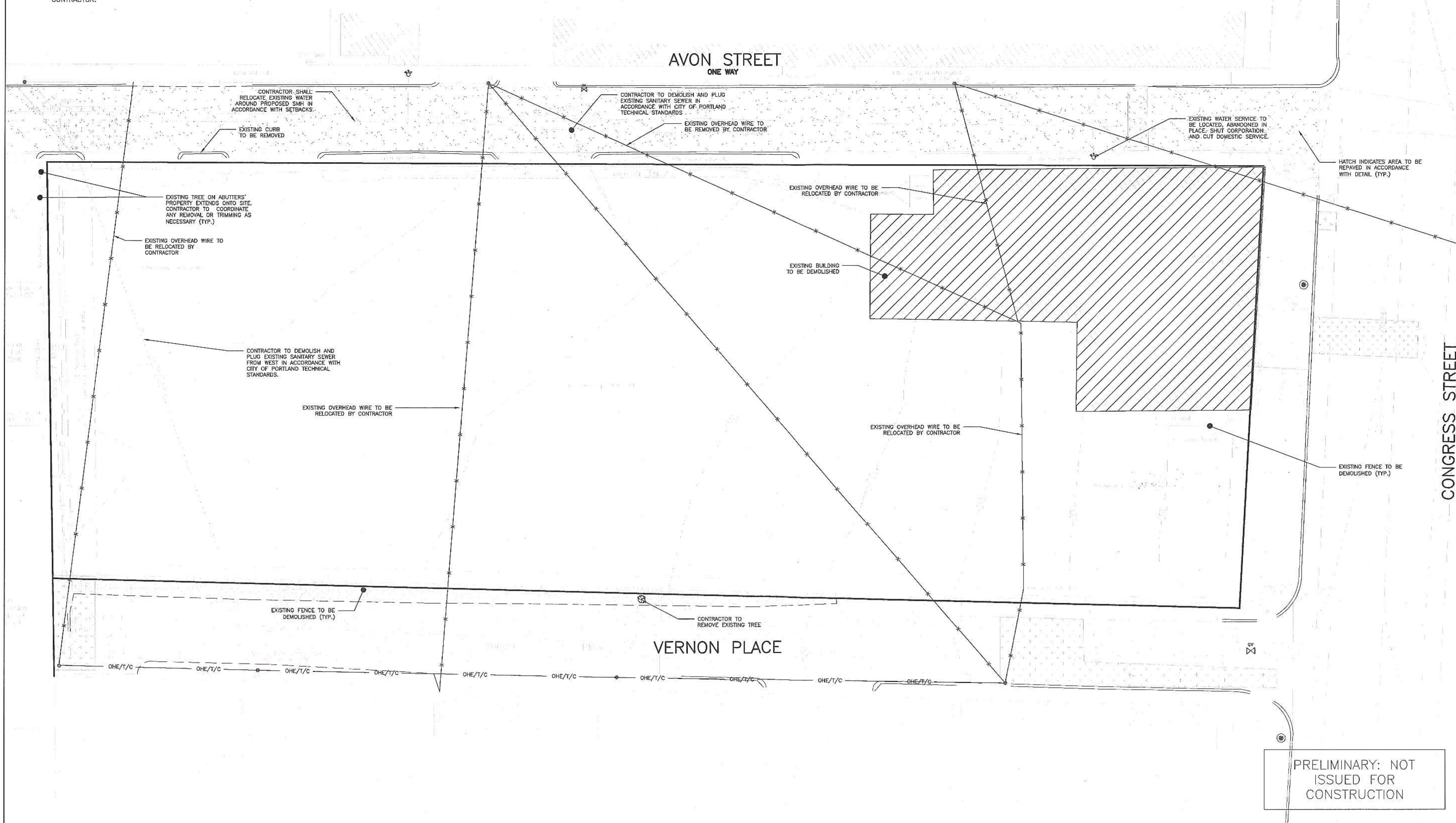
STATE OF MAINE
WILLIAM H SAVAGE
No. 11419
9-15-15
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-☐☐

Plan 3

DEMOLITION NOTES:

1. THE EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL POTENTIAL BIDDERS SHALL REFER TO THE BORING LOGS OBTAINED BY SUMMIT GEOENGINEERING SERVICES FOR REDFERN PROPERTIES, LLC DATED APRIL 15TH, 2015. FOR ADDITIONAL INFORMATION. A COPY CAN BE MADE AVAILABLE UPON REQUEST.
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. FOR ADDITIONAL ENVIRONMENTAL INFORMATION, REFER TO THE PHASE I ENVIRONMENTAL SITE ASSESSMENT FOR REDFERN PROPERTIES, LLC, 667 CONGRESS STREET DATED 4/24/15. BIDDERS SHALL REVIEW THE PHASE I – ESA PRIOR TO ANY BID OR WORK. A COPY CAN BE MADE AVAILABLE UPON REQUEST.
6. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
7. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.



PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. / DATE

DRAWING NAME: DEMOLITION PLAN

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

A C O R N ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	8/28/15
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11419
9-15-15
LICENSED
PROFESSIONAL ENGINEER

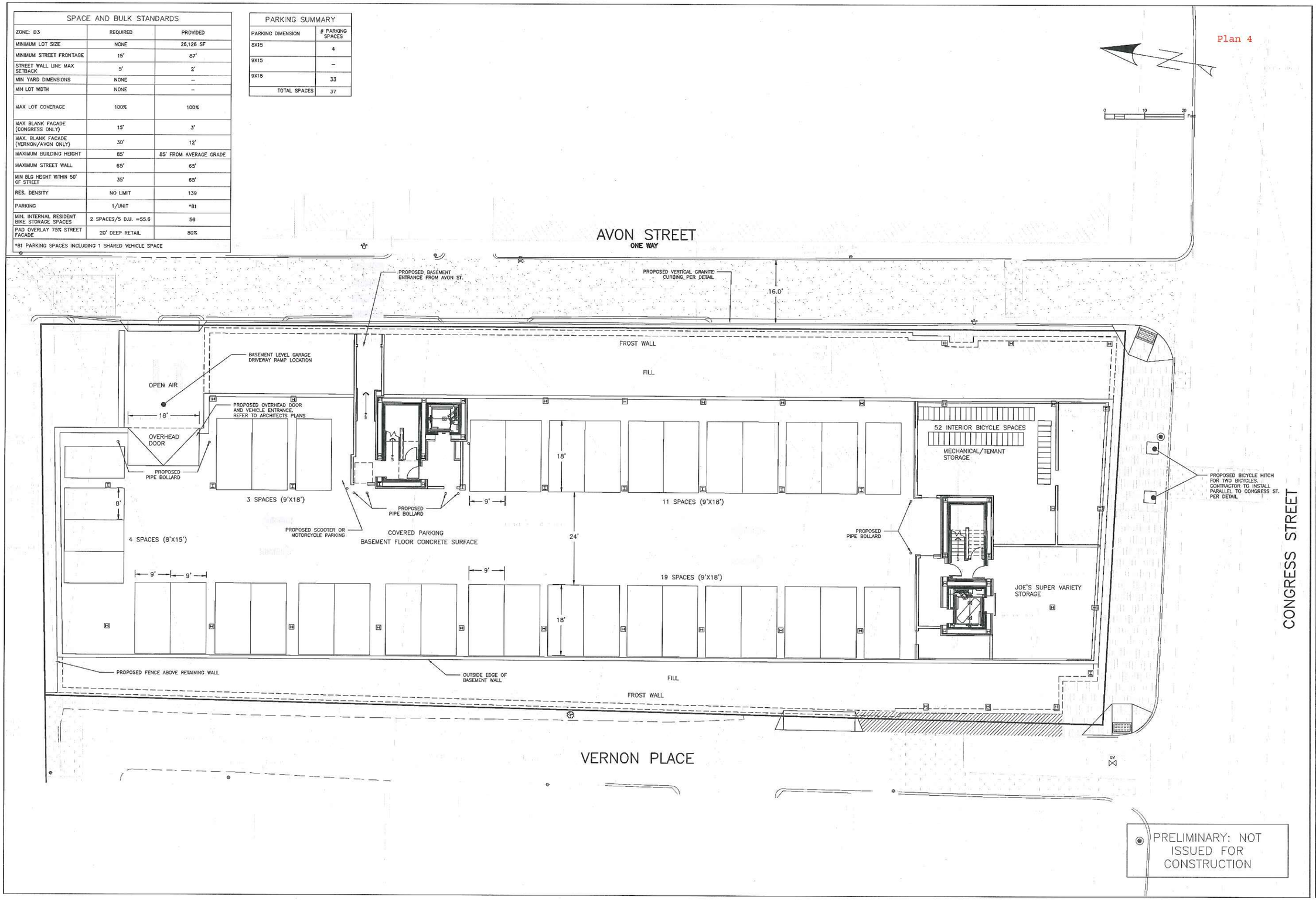
DRAWING NO.

C-

Plan 4

SPACE AND BULK STANDARDS		
ZONE: B3	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	26,126 SF
MINIMUM STREET FRONTAGE	15'	87'
STREET WALL LINE MAX SETBACK	5'	2'
MIN YARD DIMENSIONS	NONE	–
MIN LOT WIDTH	NONE	–
MAX LOT COVERAGE	100%	100%
MAX BLANK FACADE (CONGRESS ONLY)	15'	3'
MAX. BLANK FACADE (VERNON/AVON ONLY)	30'	12'
MAXIMUM BUILDING HEIGHT	85'	85' FROM AVERAGE GRADE
MAXIMUM STREET WALL	65'	65'
MIN BLG HEIGHT WITHIN 50' OF STREET	35'	65'
RES. DENSITY	NO LIMIT	139
PARKING	1/UNIT	*81
MIN. INTERNAL RESIDENT BIKE STORAGE SPACES	2 SPACES/5 D.U. =55.6	56
PAD OVERLAY 75% STREET FACADE	20' DEEP RETAIL	80%
*81 PARKING SPACES INCLUDING 1 SHARED VEHICLE SPACE		

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
8X15	4
9X15	–
9X18	33
TOTAL SPACES	37



PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

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PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. DATE

DRAWING NAME: SITE PLAN: BASEMENT

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8916 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11418
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-1

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
9X17	2
9X18	19
8.5X16	6
8.5X18	12
8X18	5
TOTAL SPACES	44

GENERAL NOTES:

1. 1.25" SURFACE PAVEMENT TO BE REPLACED FOR AVON AND VERNON ADJACENT TO PROJECT, FULL WIDTH OF PROJECT. EXISTING PAVEMENT TO BE MILLED. STRUCTURES WITHIN ROADWAY SHALL BE ADJUSTED AS NECESSARY.
2. ZONING ANALYSIS COMPLETED BY RYAN SENATORE ARCHITECTURE.
3. CONTRACTOR SHALL PLACE NEW CURBING IN LOCATIONS AS NOTED WITHOUT EXISTING CURBING, IN ACCORDANCE WITH DETAIL. EXISTING TIPDOWNS ARE LOCATED AT ALL CURB CUTS. FOR PURPOSES OF BIDDING, CONTRACTOR SHALL NOTE THAT ALL TIPDOWNS SHALL BE RECONSTRUCTED IN ACCORDANCE WITH DETAIL, AND THAT EXISTING TIPDOWNS MAY NOT MEET CITY OF PORTLAND STANDARD.
4. INTERIOR STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING SHALL BE WHITE UNLESS OTHERWISE NOTED.
5. ON-STREET PARKING DELINEATION IS FOR GRAPHIC REPRESENTATION ONLY AND NOT FOR CONSTRUCTION.
6. STAMPED PAVEMENT TO BE DEFINED BY THE CONTRACTOR SO THAT THE SURFACE IS CLEARLY DISTINGUISHED AS A WALKWAY AND SEPARATE FROM THE ADJACENT DRIVEWAY APRON

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	PROPOSED BRICK SIDEWALK
	UTILITY PAVEMENT CUTS
	EXISTING PAVEMENT TO BE RESURFACED (NOTE 1)
	STAMPED PAVEMENT FLUSH SIDEWALK (NOTE 6)
	LOCAL PAVEMENT PROFILE RECONSTRUCTION (TYP.)

Plan 5

0 10 20 Feet

AVON STREET
ONE WAY

EXISTING TREE ON ABUTTERS' PROPERTY EXTENDS ONTO SITE. CONTRACTOR TO COORDINATE ANY REMOVAL OR TRIMMING AS NECESSARY (TYP.)

EXISTING CURB TO BE REMOVED

EX. SIDWALK AND CURB TO REMAIN

EX. UTILITY POLE TO REMAIN

16.0'

10'

STAIRWELL & ELEVATOR LOCATION

8 SPACES (8.5'X18')

75°

EXISTING BUILDING TO BE DEMOLISHED

2 SPACES (9'X17')
BARRIER FREE PARKING SIGN (TYP.)

MECHANICAL

PROPOSED PAVEMENT SAWCUT (TYP.)

R9.93

PROPOSED CURB TIPDOWN (TYP.)

PROPOSED SIDEWALK RAMP WITH DETECTABLE PANEL.

EXISTING LIMIT OF PARKING SIGN; EXISTING 30 MINUTE VEHICLE LOADING ZONE.

JOE'S VARIETY STORE

EXISTING LAMP POST (JOE'S)

PROPOSED BICYCLE HITCH FOR TWO BICYCLES; CONTRACTOR TO INSTALL PARALLEL TO CONGRESS ST. PER DETAIL.

4 SPACES (9'X18')

OPEN AIR

6 SPACES (9'X18')

TANDEM PARKING

PROPOSED FIRST FLOOR SURFACE MOUNT PIPE BOLLARD (TYP.)

17.83'

PROPOSED PARKING SPACE (TYP.)

PROPOSED ADA PARKING SPACE (TYP.)

18.5'

4 SPACES (8'X18')

REFRIGERATION SPACE

STAIRWELL AND ELEVATOR LOCATION

COVERED PARKING
FIRST FLOOR CONCRETE SURFACE

6 SPACES (8.5'X16')

9'

EDGE OF FIRST FLOOR GARAGE (TYP.)

PROPOSED COLUMN, SEE ARCHITECTURAL PLAN (TYP.)

17.83'

MAIL ROOM

REFRIGERATION SPACE

EXISTING FENCE TO BE DEMOLISHED (TYP.)

22'

9 SPACES (9'X18')

4 SPACES (8.5'X18')

1 SHARED SPACE (8'X18')

FIRST FLOOR GARAGE DRIVEWAY RAMP LOCATION

EXISTING PARKING SPACE (TO REMAIN)

OPEN AIR

18'

TRASH

FIRE COMMUNICATION

LOBBY

PROPOSED RED MAPLE AND 4'X6' TREE GRATE, TYP. OF 3

EX. SIDEWALK TO BE REPLACED

OVERHEAD DOOR

PROPOSED CURB TIPDOWN (TYP.)

R10.69

PROPOSED SIDEWALK RAMP WITH DETECTABLE PANEL.

PROPOSED 18" VERTICAL GRANITE CURB

EX. PAVEMENT EDGE

PROPERTY BOUNDARY

EXISTING FENCE TO BE DEMOLISHED (TYP.)

REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING MOUNTED STREET LIGHTS

CONTRACTOR TO REMOVE EXISTING TREE

VERNON PLACE

19.03'

PROPOSED FIRST FLOOR PARKING GARAGE ENTRANCE

2'X2' TRASH BINS (TYP.)

5.55'

EX. 20.62'

PROPOSED CURB TIPDOWN (TYP.)

3.89'

EX. CURB AND SIDEWALK (TO REMAIN)

PROPOSED OVERHEAD DOOR AND FIRST FLOOR VEHICLE ENTRANCE. REFER TO ARCHITECTS PLANS.

CONGRESS STREET

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

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PRELIM. APPLICATION	WHS 7/30/15
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COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. DATE

DRAWING NAME: SITE PLAN: FIRST FLOOR

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2635

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11418
9-15-15
LICENSED PROFESSIONAL ENGINEER

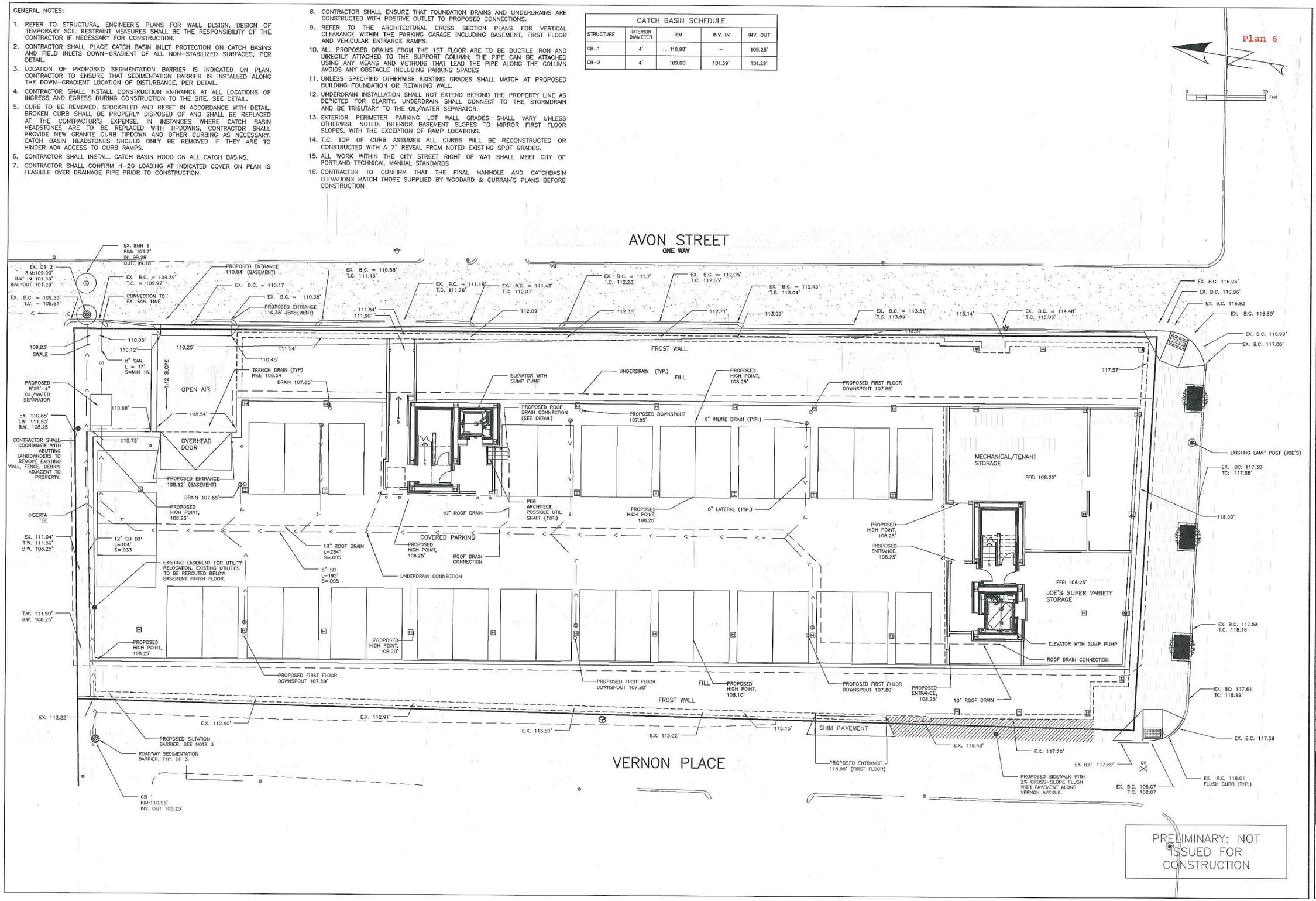
DRAWING NO.
C-11

GENERAL NOTES:

1. REFER TO STRUCTURAL ENGINEER'S PLANS FOR WALL DESIGN. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
2. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
3. LOCATION OF PROPOSED SEDIMENTATION BARRIER IS INDICATED ON PLAN. CONTRACTOR TO ENSURE THAT SEDIMENTATION BARRIER IS INSTALLED ALONG THE DOWN-GRADIENT LOCATION OF DISTURBANCE, PER DETAIL.
4. CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AT ALL LOCATIONS OF INGRESS AND EGRESS DURING CONSTRUCTION TO THE SITE. SEE DETAIL.
5. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. IN INSTANCES WHERE CATCH BASIN HEADSTONES ARE TO BE REPLACED WITH TIPDOWNS, CONTRACTOR SHALL PROVIDE NEW GRANITE CURB TIPDOWN AND OTHER CURBING AS NECESSARY. CATCH BASIN HEADSTONES SHOULD ONLY BE REMOVED IF THEY ARE TO HINDER ADA ACCESS TO CURB RAMPS.
6. CONTRACTOR SHALL INSTALL CATCH BASIN HOOD ON ALL CATCH BASINS.
7. CONTRACTOR SHALL CONFIRM H-20 LOADING AT INDICATED COVER ON PLAN IS FEASIBLE OVER DRAINAGE PIPE PRIOR TO CONSTRUCTION.
8. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
9. REFER TO THE ARCHITECTURAL CROSS SECTION PLANS FOR VERTICAL CLEARANCE WITHIN THE PARKING GARAGE INCLUDING BASEMENT, FIRST FLOOR AND VEHICULAR ENTRANCE RAMPS.
10. ALL PROPOSED DRAINS FROM THE 1ST FLOOR ARE TO BE DUCTILE IRON AND DIRECTLY ATTACHED TO THE SUPPORT COLUMN; THE PIPE CAN BE ATTACHED USING ANY MEANS AND METHODS THAT LEAD THE PIPE ALONG THE COLUMN AVOIDS ANY OBSTACLE INCLUDING PARKING SPACES
11. UNLESS SPECIFIED OTHERWISE EXISTING GRADES SHALL MATCH AT PROPOSED BUILDING FOUNDATION OR RETAINING WALL.
12. UNDERDRAIN INSTALLATION SHALL NOT EXTEND BEYOND THE PROPERTY LINE AS DEPICTED FOR CLARITY. UNDERDRAIN SHALL CONNECT TO THE STORMDRAIN AND BE TRIBUTARY TO THE OIL/WATER SEPARATOR.
13. EXTERIOR PERIMETER PARKING LOT WALL GRADES SHALL VARY UNLESS OTHERWISE NOTED. INTERIOR BASEMENT SLOPES TO MIRROR FIRST FLOOR SLOPES, WITH THE EXCEPTION OF RAMP LOCATIONS.
14. T.C. TOP OF CURB ASSUMES ALL CURBS WILL BE RECONSTRUCTED OR CONSTRUCTED WITH A 7" REVEAL FROM NOTED EXISTING SPOT GRADES.
15. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS
16. CONTRACTOR TO CONFIRM THAT THE FINAL MANHOLE AND CATCHBASIN ELEVATIONS MATCH THOSE SUPPLIED BY WOODARD & CURRAN'S PLANS BEFORE CONSTRUCTION

CATCH BASIN SCHEDULE

STRUCTURE	INTERIOR DIAMETER	RIM	INV. IN	INV. OUT
CB-1	4'	110.98'	–	105.25'
CB-2	4'	109.00'	101.39'	101.29'



PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

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PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 9/21/15
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. DATE

DRAWING NAME: GRADING & DRAINAGE PLAN: BASEMENT

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2855

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H SAVAGE No. 11418 9/15/15 REGISTERED PROFESSIONAL ENGINEER

DRAWING NO. C-□□

Plan .7

AVON STREET
ONE WAY

VERNON PLACE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. DATE

DRAWING NAME: GRADING & DRAINAGE PLAN: FIRST FLOOR

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

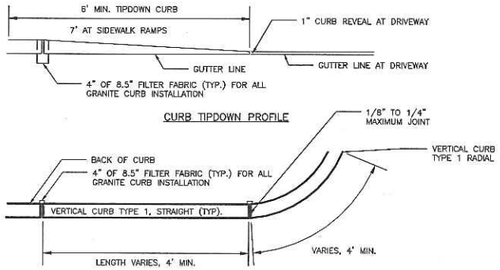
ACORN ENGINEERING, INC.

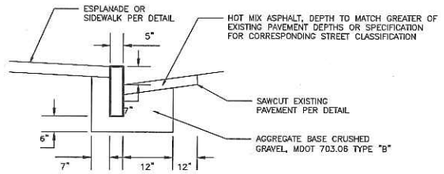
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2805

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11418
9-15-15
LICENSED
PROFESSIONAL ENGINEER

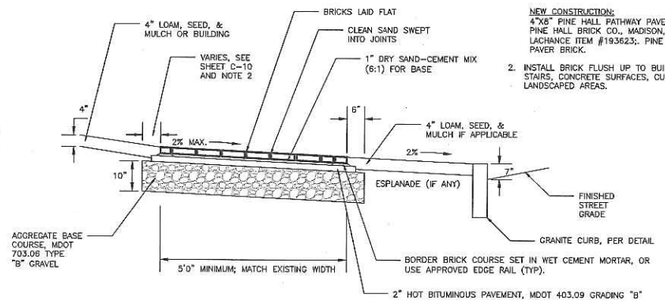
DRAWING NO.
C-1





VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL

NOT TO SCALE



NOTES:

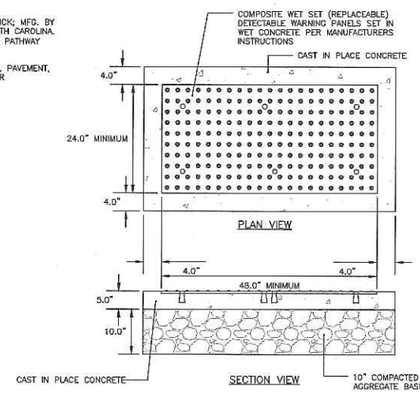
1. BRICKS TO BE USED:

   NEW CONSTRUCTION:
   4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.

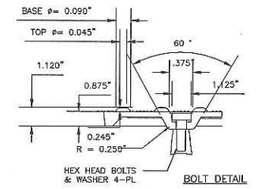
BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL

NOT TO SCALE



NOTES:

1. COMPOSITE WET SET (REPLACEABLE) DETECTABLE WARNING PANELS SHALL BE AS MANUFACTURED BY ADA SOLUTIONS, INC. (WWW.ADATILE.COM) OR APPROVED EQUAL.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE CONCRETE SHALL BE SEALED PRIOR TO SETTING PANELS. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE PANEL AND CONCRETE, ALONG WITH A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. FOR ALL DETECTABLE WARNING PANELS (EXCEPT AS SPECIFIED IN TECHNICAL MANUAL 1.8.4.), FEDERAL DARK GRAY COLORED (#36118) PANEL(S) SHALL BE USED. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
5. SIZE: THE DETECTABLE WARNING PANEL(S) SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
6. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST TO THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.

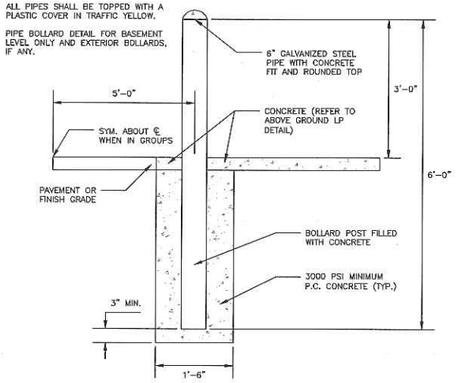


SIDEWALK RAMP DETECTABLE WARNING PANEL

NOT TO SCALE

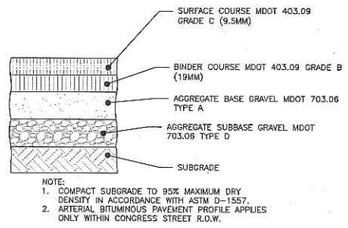
DESIGN NOTE:

1. ALL PIPES SHALL BE TOPPED WITH A PLASTIC COVER IN TRAFFIC YELLOW.
2. PIPE BOLLARD DETAIL FOR BASEMENT LEVEL ONLY AND EXTERIOR BOLLARDS, IF ANY.



BASEMENT PIPE BOLLARD

NOT TO SCALE

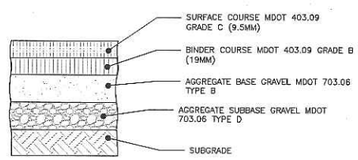


NOTE:
1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
2. ARTERIAL BITUMINOUS PAVEMENT PROFILE APPLIES ONLY WITHIN CONGRESS STREET R.O.W.

THICKNESS OF LAYERS	
STANDARD	LAYERS
2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
3"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
6"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT PROFILE

NOT TO SCALE



NOTE:
1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557
2. LOCAL BITUMINOUS PAVEMENT PROFILE APPLIES TO LOCATIONS NOT INCLUDED WITHIN CONGRESS STREET R.O.W.

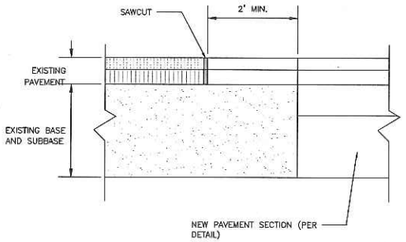
THICKNESS OF LAYERS	
STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (9.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

LOCAL BITUMINOUS PAVEMENT PROFILE

NOT TO SCALE

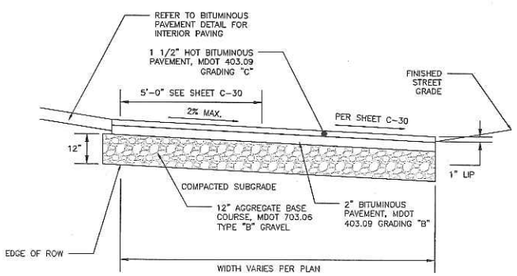
NOTES:

1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



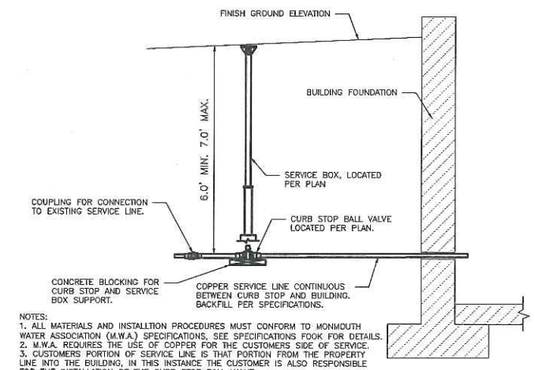
PAVEMENT SAWCUT DETAIL

NOT TO SCALE



BITUMINOUS DRIVEWAY APRON DETAIL

NOT TO SCALE

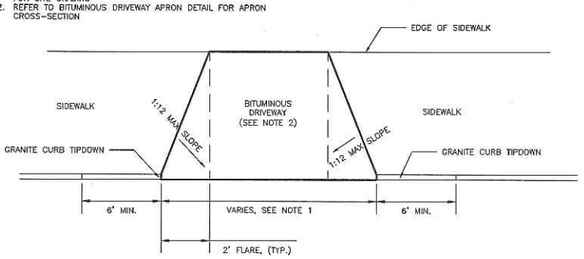


NOTES:
1. ALL MATERIALS AND INSTALLTION PROCEDURES MUST CONFORM TO MONMOUTH WATER ASSOCIATION (M.W.A.) SPECIFICATIONS, SEE SPECIFICATIONS FOOK FOR DETAILS.
2. M.W.A. REQUIRES THE USE OF COPPER FOR THE CUSTOMERS SIDE OF SERVICE.
3. CUSTOMERS PORTION OF SERVICE LINE IS THAT PORTION FROM THE PROPERTY LINE INTO THE BUILDING, IN THIS INSTANCE THE CUSTOMER IS ALSO RESPONSIBLE FOR THE INSTALLATION OF THE CURB STOP BALL VALVE.
4. FOR THE INTERIOR BUILDING PLUMBING REFER TO THE PLUMPING PLAN BY MECHANICAL SYSTEMS ENGINEERS.

SERVICE INSTALLATION DETAIL

NOT TO SCALE

NOTES:
1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR SITE GRADING
2. REFER TO BITUMINOUS DRIVEWAY APRON DETAIL FOR APRON CROSS-SECTION



DRIVEWAY APRON LAYOUT DETAIL

NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. DATE

DRAWING NAME: SITE DETAILS 1

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8818 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

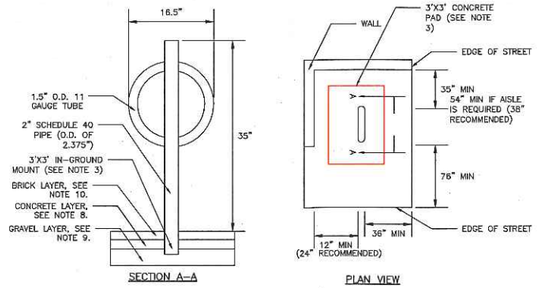
FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAC
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11419
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-□□

NOTES:

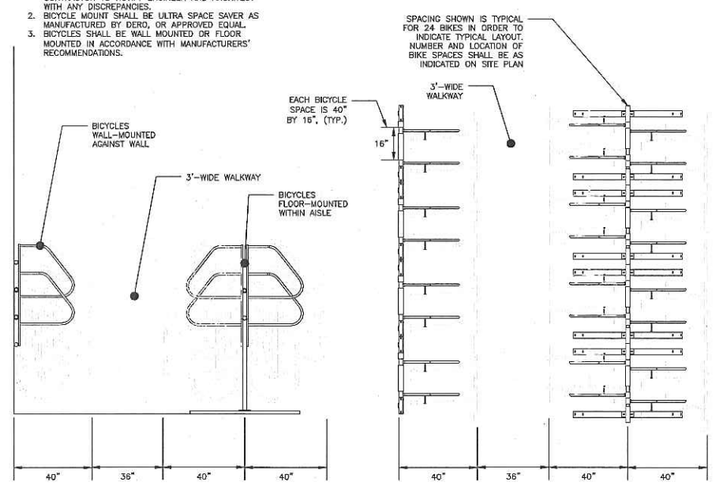
1. BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.
2. BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION.
3. BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH AN IN-GROUND MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.
4. BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 36".
7. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
8. CONCRETE SHALL BE 4000 PSI @28 DAYS. BOTTOM OF CONCRETE SHALL BE AT TOP OF SIDEWALK GRAVEL ELEVATION. DEPTH VARIES APPROX. 4"-7".
9. GRAVEL LAYER SHALL BE INSTALLED IN ACCORDANCE WITH BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL, AND SHALL BE MAINEDOT 703.06 TYPE B.
10. TOP OF BRICK LAYER SHALL BE AT SAME ELEVATION IN ACCORDANCE WITH BRICK SIDEWALK DETAIL.



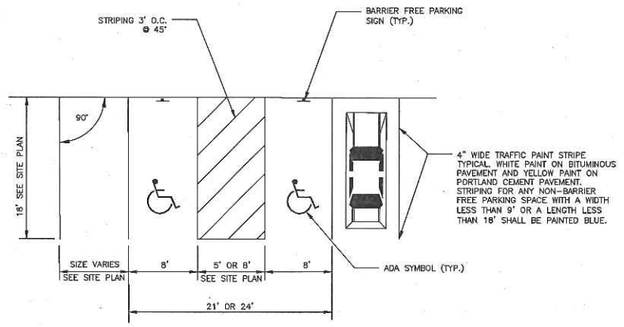
BICYCLE HITCH DETAIL
NOT TO SCALE

NOTES:

1. FINAL LOCATION OF INTERIOR BICYCLE RACKS SHALL CONFORM TO ALL ARCHITECTURAL DRAWINGS. CONTRACTOR TO NOTIFY ENGINEER AND ARCHITECT WITH ANY DISCREPANCIES.
2. BICYCLE MOUNT SHALL BE ULTRA SPACE SAVER AS MANUFACTURED BY DERO, OR APPROVED EQUAL.
3. BICYCLES SHALL BE WALL MOUNTED OR FLOOR MOUNTED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.



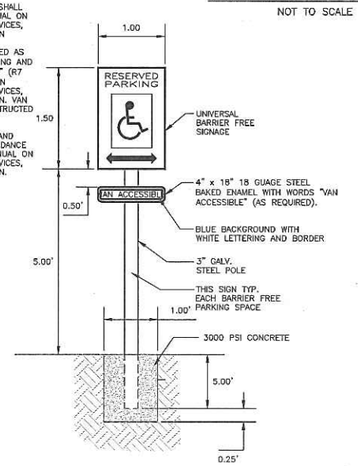
INTERIOR BICYCLE SPACE LAYOUT
NOT TO SCALE



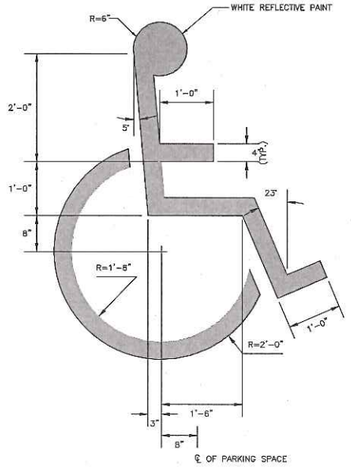
PARKING SPACE DIMENSIONS
NOT TO SCALE

NOTES:

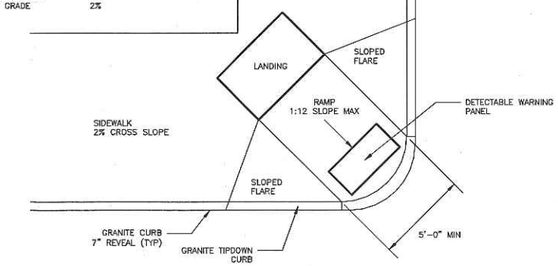
1. ALL ASPECTS OF RESERVED PARKING SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION
2. SIGN SHALL BE CONSTRUCTED AS SIGN R7-8 UNDER THE "PARKING AND STANDING SIGNS AND PLAQUES" (R7 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION. VAN ACCESSIBILITY SHALL BE CONSTRUCTED AS SIGN R7-8a OR R7-8b.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



BARRIER FREE PARKING SIGN
NOT TO SCALE

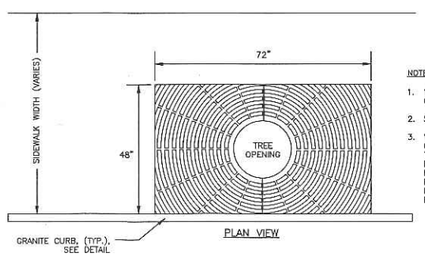


INTERNATIONAL BARRIER FREE SYMBOL
NOT TO SCALE



SIDEWALK RAMP WITH DETECTABLE PANEL
NOT TO SCALE

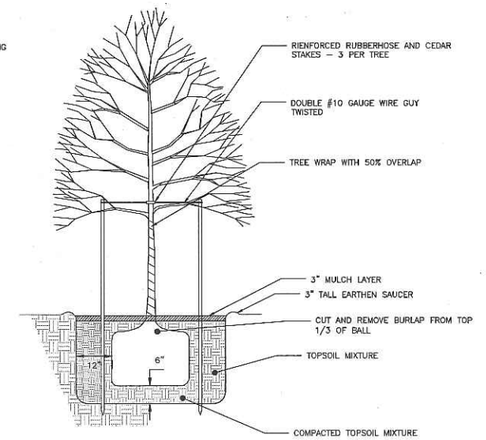
DESIGN ELEMENT	SLOPE IN DIRECTION OF TRAVEL	CROSS SLOPE
APPROACH	MAX 8.33%	2%
LANDING	2%	2%
RAMP	MAX 8.33%	MATCH STREET GRADE
FLARE	MAX 10% AT CURB FACE	--
SIDEWALK	MATCH STREET GRADE	2%



NOTES:

1. 16" EXPANDABLE TREE OPENING; .375" SLOT OPENINGS.
2. SIDEWALK MATERIAL PER PLAN.
3. WHEN INSTALLED IN A BRICK SIDEWALK, GRATE REQUIRES A FRAME TO BE INSTALLED TO HOLD GRATE IN PLACE. CONTRACTOR TO INSTALL IN ACCORDANCE WITH MANUFACTURERS INSTALLATION PROCEDURES FOR PAVERS. CONTRACTOR TO SUBMIT INSTALLATION PROCEDURES FOR REVIEW FROM ENGINEER PRIOR TO CONSTRUCTION.

EXPANDABLE TREE GRATE NEENAH MODEL R-8811
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. / DATE

DRAWING NAME: SITE DETAILS 2
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 6818 PORTLAND, ME 04104

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 772-2893

FILE:	1060_DETAILS
DATE:	4/20/2015
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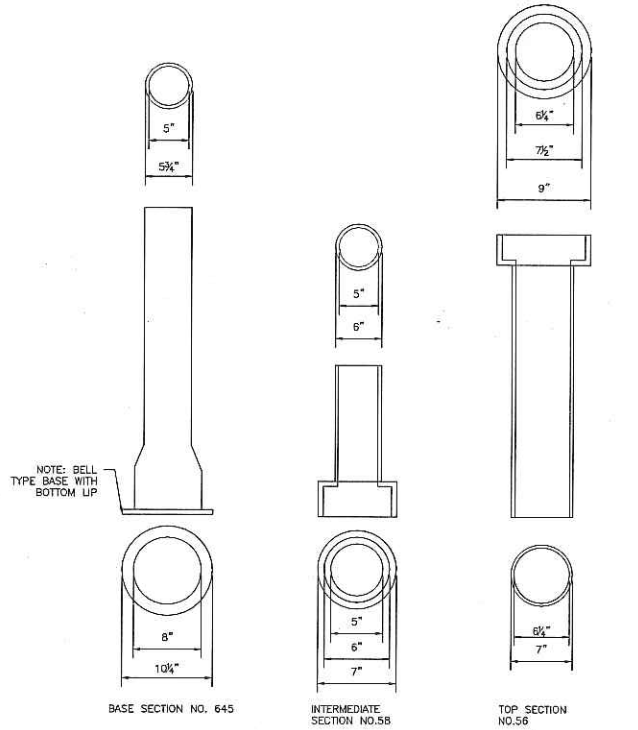
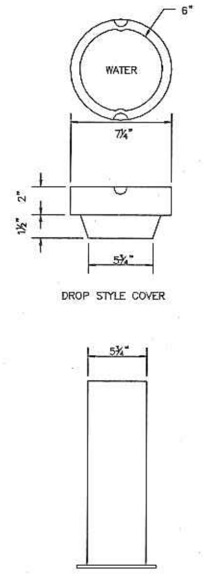
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11418
9-15-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-01

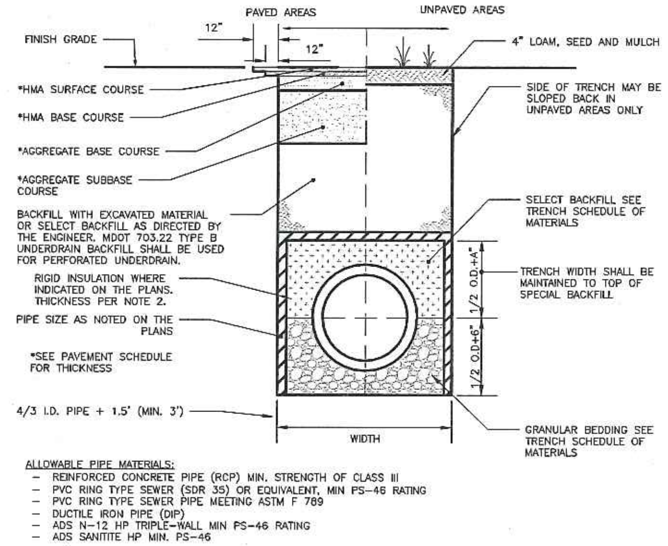




(NUMBERS ARE FOR 5 ¼" BUFFALO VALVE BOXES) (BASE SECTION MAY BE USED AS INTERMEDIATE SECTION)

VALVE BOX & COVER

N.T.S.



ALLOWABLE PIPE MATERIALS:
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N-12 HP TRIPLE-WALL MIN PS-46 RATING
- ADS SANITITE HP MIN. PS-46

SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

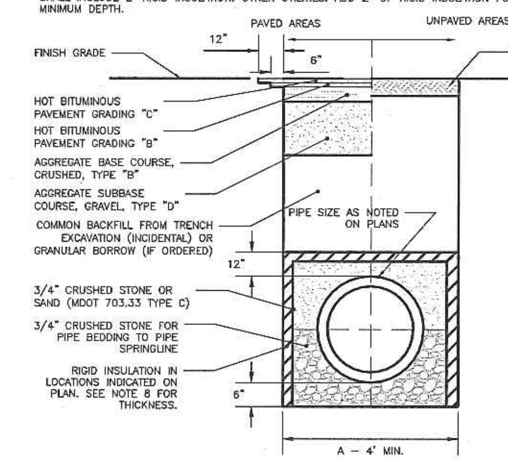
NOTE:
1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   4.1. 2'-0" – STORM DRAIN
   4.2. 5'-0" – SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.

STORM DRAIN AND SEWER TYPICAL TRENCH SECTION

NOT TO SCALE

DESIGN NOTES:

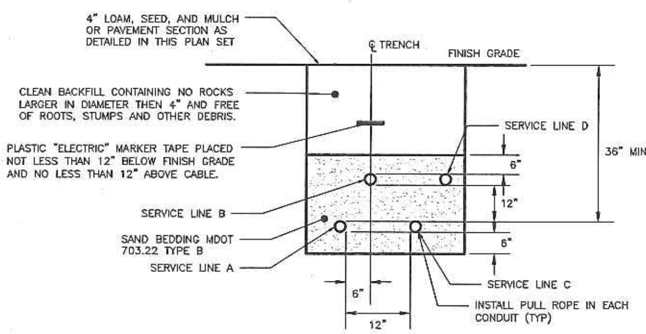
1) ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2) ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II-2.
3) BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4) WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF.SD) SHALL BE ORIENTED UP.
5) ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6) IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7) THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND ROW.
STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.



TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	5
15	5
18	5
24	6
36	6
48	7

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE



CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2-5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2-4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2-4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2-4"	SCHEDULE 40 PVC	CABLE	–

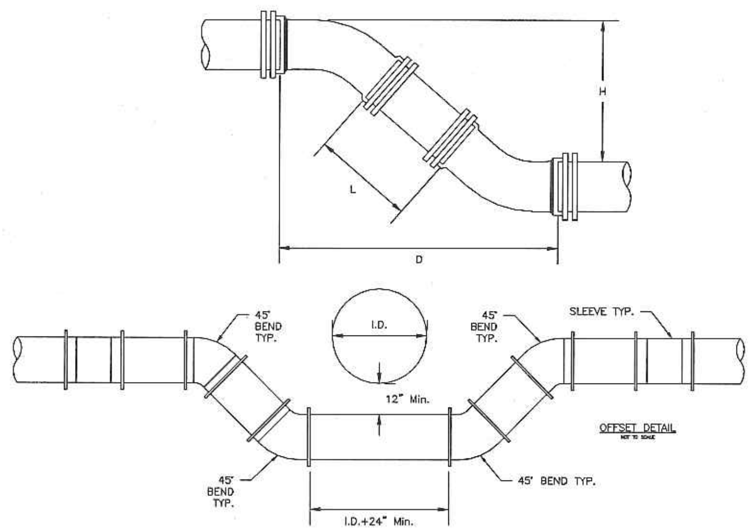
NOTE:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.

2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

UTILITY TRENCH – PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE

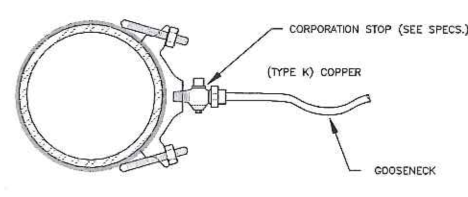


NOTE: DIMENSIONS APPLICABLE FOR SIGMA COMPACT BENDS. FOR TYLER COMPACT BENDS, ADD 1/2" TO "D" DIMENSION AND SUBTRACT 1/2" FROM "L" DIMENSION. FOR OTHER FITTINGS REFER TO MANUFACTURER'S RECOMMENDATIONS.

	6" PIPE		8" PIPE		12" PIPE	
H	D	L	D	L	D	L
12"	1' 6-1/2"	0' 10-1/2"	1' 7-1/2"	0' 9-1/2"	1' 11-1/2"	0' 5-1/2"
13"	1' 7-1/2"	0' 11-7/8"	1' 8-1/2"	0' 10-7/8"	2' 0-1/2"	0' 6-7/8"
14"	1' 8-1/2"	1' 1-5/16"	1' 9-1/2"	1' 0-5/16"	2' 1-1/2"	0' 8-5/16"
15"	1' 9-1/2"	1' 2-11/16"	1' 10-1/2"	1' 1-11/16"	2' 2-1/2"	0' 9-11/16"
16"	1' 10-1/2"	1' 4-1/8"	1' 11-1/2"	1' 3-1/8"	2' 3-1/2"	0' 11-1/8"
17"	1' 11-1/2"	1' 5-9/16"	2' 0-1/2"	1' 4-9/16"	2' 4-1/2"	1' 0-9/16"
18"	2' 0-1/2"	1' 6-15/16"	2' 1-1/2"	1' 5-15/16"	2' 5-1/2"	1' 1-15/16"
19"	2' 1-1/2"	1' 8-3/8"	2' 2-1/2"	1' 7-3/8"	2' 6-1/2"	1' 3-3/8"
20"	2' 2-1/2"	1' 9-13/16"	2' 3-1/2"	1' 8-13/16"	2' 7-1/2"	1' 4-13/16"
21"	2' 3-1/2"	1' 11-3/16"	2' 4-1/2"	1' 10-3/16"	2' 8-1/2"	1' 6-3/16"
22"	2' 4-1/2"	2' 0-5/8"	2' 5-1/2"	1' 11-5/8"	2' 9-1/2"	1' 7-5/8"
23"	2' 5-1/2"	2' 2"	2' 6-1/2"	2' 1"	2' 10-1/2"	1' 9"
24"	2' 6-1/2"	2' 3-7/16"	2' 7-1/2"	2' 2-7/16"	2' 11-1/2"	1' 10-7/16"
25"	2' 7-1/2"	2' 4-7/8"	2' 8-1/2"	2' 3-7/8"	3' 0-1/2"	1' 11-7/8"
26"	2' 8-1/2"	2' 6-1/4"	2' 9-1/2"	2' 5-1/4"	3' 1-1/2"	2' 1-1/4"
27"	2' 9-1/2"	2' 7-11/16"	2' 10-1/2"	2' 6-11/16"	3' 2-1/2"	2' 2-11/16"
28"	2' 10-1/2"	2' 9-1/8"	2' 11-1/2"	2' 8-1/8"	3' 3-1/2"	2' 4-1/8"
29"	2' 11-1/2"	2' 10-1/2"	3' 0-1/2"	2' 9-1/2"	3' 4-1/2"	2' 5-1/2"
30"	3' 0-1/2"	2' 11-15/16"	3' 1-1/2"	2' 10-15/16"	3' 5-1/2"	2' 6-15/16"
31"	3' 1-1/2"	3' 1-5/16"	3' 2-1/2"	3' 0-5/16"	3' 6-1/2"	2' 8-5/16"
32"	3' 2-1/2"	3' 2-3/4"	3' 3-1/2"	3' 1-3/4"	3' 7-1/2"	2' 9-3/4"
33"	3' 3-1/2"	3' 4-3/16"	3' 4-1/2"	3' 3-3/16"	3' 8-1/2"	2' 11-3/16"
34"	3' 4-1/2"	3' 5-9/16"	3' 5-1/2"	3' 4-9/16"	3' 9-1/2"	3' 0-9/16"
35"	3' 5-1/2"	3' 7"	3' 6-1/2"	3' 6"	3' 10-1/2"	3' 2"
36"	3' 6-1/2"	3' 8-7/16"	3' 7-1/2"	3' 7-7/16"	3' 11-1/2"	3' 3-7/16"
37"	3' 7-1/2"	3' 9-13/16"	3' 8-1/2"	3' 8-13/16"	4' 0-1/2"	3' 4-13/16"
38"	3' 8-1/2"	3' 11-1/4"	3' 9-1/2"	3' 10-1/4"	4' 1-1/2"	3' 6-1/4"
39"	3' 9-1/2"	4' 0-11/16"	3' 10-1/2"	3' 11-11/16"	4' 2-1/2"	3' 7-11/16"
40"	3' 10-1/2"	4' 2-1/16"	3' 11-1/2"	4' 1-1/16"	4' 3-1/2"	3' 9-1/16"
41"	3' 11-1/2"	4' 3-1/2"	4' 0-1/2"	4' 2-1/2"	4' 4-1/2"	3' 10-1/2"
42"	4' 0-1/2"	4' 4-7/8"	4' 1-1/2"	4' 3-7/8"	4' 5-1/2"	3' 11-7/8"
43"	4' 1-1/2"	4' 6-5/16"	4' 2-1/2"	4' 5-5/16"	4' 6-1/2"	4' 1-5/16"
44"	4' 2-1/2"	4' 7-3/4"	4' 3-1/2"	4' 6-3/4"	4' 7-1/2"	4' 2-3/4"
45"	4' 3-1/2"	4' 9-1/8"	4' 4-1/2"	4' 8-1/8"	4' 8-1/2"	4' 4-1/8"
46"	4' 4-1/2"	4' 10-9/16"	4' 5-1/2"	4' 9-9/16"	4' 9-1/2"	4' 5-9/16"
47"	4' 5-1/2"	4' 11-15/16"	4' 6-1/2"	4' 10-15/16"	4' 10-1/2"	4' 6-15/16"
48"	4' 6-1/2"	5' 1-3/8"	4' 7-1/2"	5' 0-3/8"	4' 11-1/2"	4' 8-3/8"
49"	4' 7-1/2"	5' 2-13/16"	4' 8-1/2"	5' 1-13/16"	5' 0-1/2"	4' 9-13/16"
50"	4' 8-1/2"	5' 4-3/16"	4' 9-1/2"	5' 3-3/16"	5' 1-1/2"	4' 11-3/16"
51"	4' 9-1/2"	5' 5-5/8"	4' 10-1/2"	5' 4-5/8"	5' 2-1/2"	5' 0-5/8"
52"	4' 10-1/2"	5' 7-1/16"	4' 11-1/2"	5' 6-1/16"	5' 3-1/2"	5' 2-1/16"
53"	4' 11-1/2"	5' 8-7/16"	5' 0-1/2"	5' 7-7/16"	5' 4-1/2"	5' 3-7/16"
54"	5' 0-1/2"	5' 9-7/8"	5' 1-1/2"	5' 8-7/8"	5' 5-1/2"	5' 4-7/8"
55"	5' 1-1/2"	5' 11-5/16"	5' 2-1/2"	5' 10-5/16"	5' 6-1/2"	5' 6-5/16"

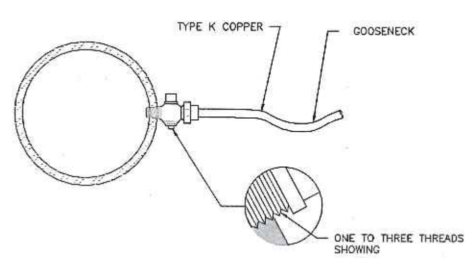
TYPICAL MAIN OFFSET

NOT TO SCALE



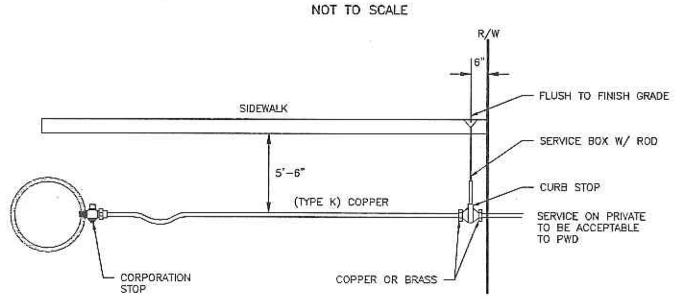
SERVICE SADDLE

(1-1/2" AND 2" C.C. THREAD)



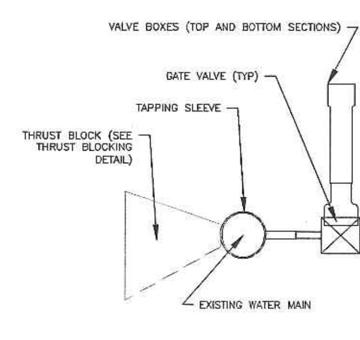
SERVICE TAP

(3/4" AND 1" C.C. THREAD) NOT TO SCALE



TYPICAL SERVICE CONNECTION

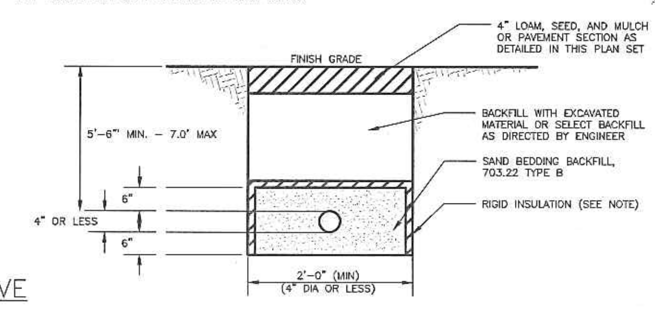
NOT TO SCALE



TAPPING SLEEVE AND VALVE

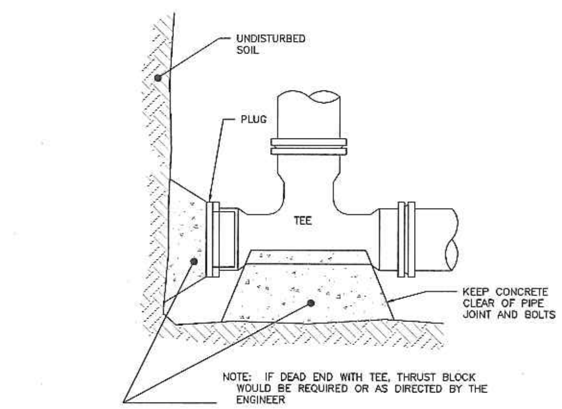
NOT TO SCALE

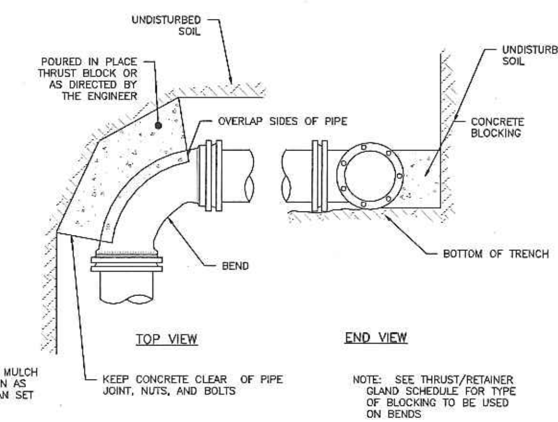
NOTE:
1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'-6" OF COVER IS POSSIBLE ADD 1 INCH OF "BLUE DOW" RIGID INSULATION FOR EVERY 12" LESS COVER.



WATER SERVICE TRENCH SECTION DETAIL

NOT TO SCALE





REGULAR BEND

THRUST BLOCKING

NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/5/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. / DATE

DRAWING NAME: UTILITY DETAILS

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8816 PORTLAND, ME 04104

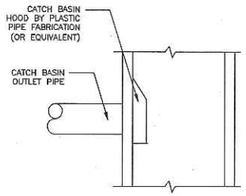
ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC. 158 DANFORTH STREET, PORTLAND MAINE 04102 (207) 775-2655

FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H SAVAGE No 11419 LICENSED PROFESSIONAL ENGINEER 9-15-15

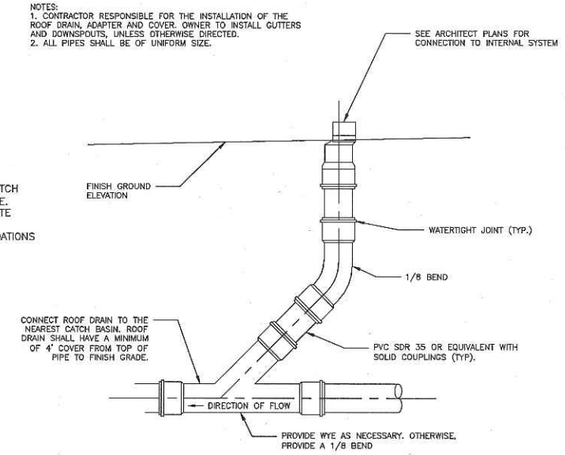
DRAWING NO. C-



NOTES:
1. INSTALL CATCH BASIN HOODS IN ALL CATCH BASINS WITH A 12" OR 15" OUTLET PIPE.
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS

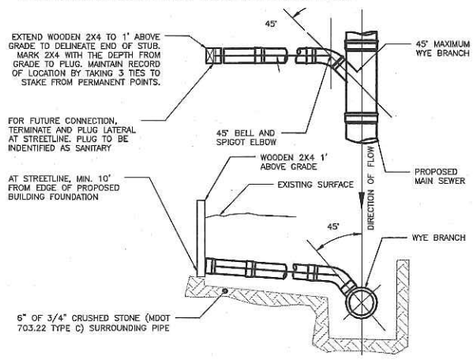
CATCH BASIN HOOD DETAIL
NOT TO SCALE

NOTES:
1. CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE ROOF DRAIN, ADAPTER AND COVER. OWNER TO INSTALL GUTTERS AND DOWNSPOUTS, UNLESS OTHERWISE DIRECTED.
2. ALL PIPES SHALL BE OF UNIFORM SIZE.



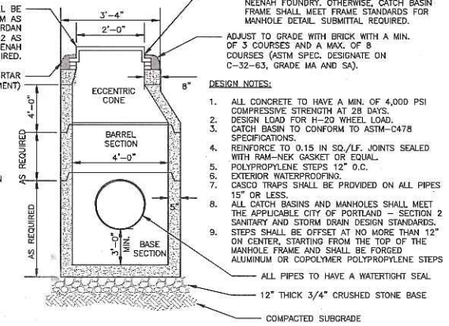
ROOF DRAIN DETAIL
NOT TO SCALE

NOTES:
1) LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2) SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3) CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



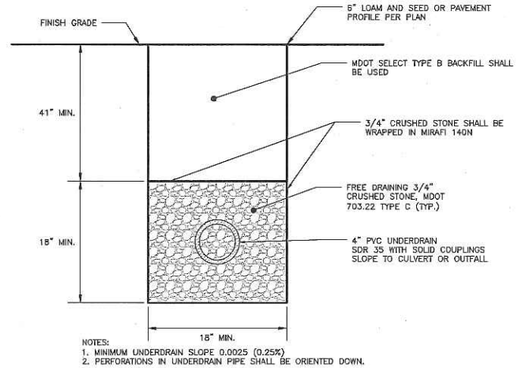
SEWER TEE/WYE CONNECTION DETAIL
NOT TO SCALE

CATCH BASIN GRATE SHALL BE EITHER ITEM # 2440M AS MANUFACTURED BY EAST JORDAN CO., OR ITEM # 32480002 AS MANUFACTURED BY NEENAH FOUNDRY. SUBMITTAL REQUIRED.
PORTLAND CEMENT MORTAR (TYPE 2 CEMENT)
NOTE: ALL CATCH BASIN PIPES SHALL HAVE A CATCH BASIN HOOD, PER DETAIL THIS SHEET.



DESIGN NOTES:
1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND – SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
9. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS

4'-0" DIAMETER PRECAST CATCH BASIN
NOT TO SCALE

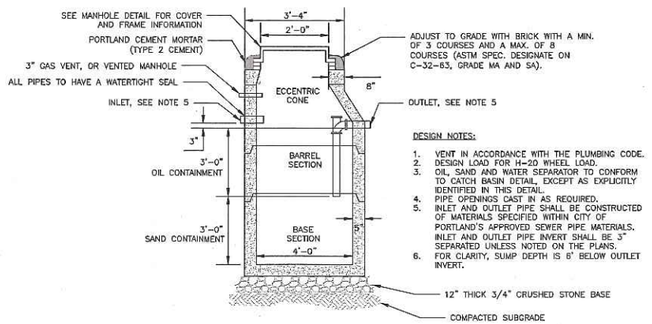


NOTES:
1. MINIMUM UNDERDRAIN SLOPE 0.0025 (0.25%)
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.

UNDERDRAIN DETAIL
NOT TO SCALE

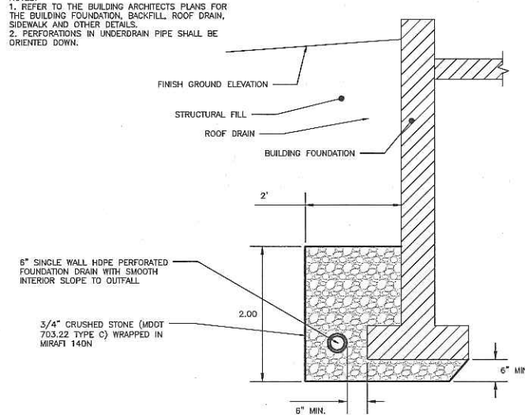
DESIGN NOTES:
1. IT IS ASSUMED THAT THE EXISTING PIPE IS OF VITRIFIED CLAY CONSTRUCTION. USE CAP OR PLUG FOR PVC PIPE

MASONRY PLUG DETAIL
NOT TO SCALE

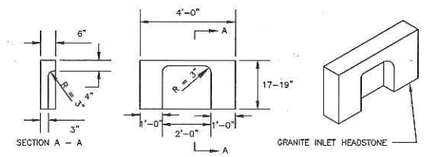


DESIGN NOTES:
1. VENT IN ACCORDANCE WITH THE PLUMBING CODE.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. OIL, SAND AND WATER SEPARATOR TO CONFORM TO CATCH BASIN DETAIL, EXCEPT AS EXPLICITLY IDENTIFIED IN THIS DETAIL.
4. PIPE OPENINGS CAST IN AS REQUIRED.
5. INLET AND OUTLET PIPE SHALL BE CONSTRUCTED OF MATERIALS SPECIFIED WITHIN CITY OF PORTLAND'S APPROVED SEWER PIPE MATERIALS. INLET AND OUTLET PIPE INVERT SHALL BE 3" SEPARATED UNLESS NOTED ON THE PLANS.
6. FOR CLARITY, SUMP DEPTH IS 6" BELOW OUTLET INVERT.

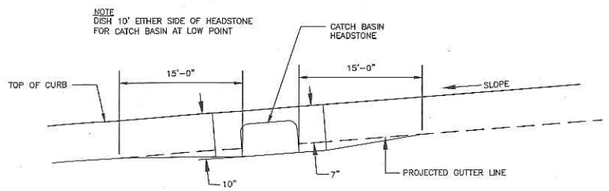
4'-0" DIAMETER PRECAST OIL AND WATER SEPARATOR
NOT TO SCALE



FOUNDATION DRAIN DETAIL
NOT TO SCALE



4' GRANITE HEADSTONE FOR CATCH BASIN INLET
NOT TO SCALE



PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET
NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15

REVISION	REV. DATE

DRAWING NAME: DRAINAGE DETAILS 1
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 6816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2605

FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
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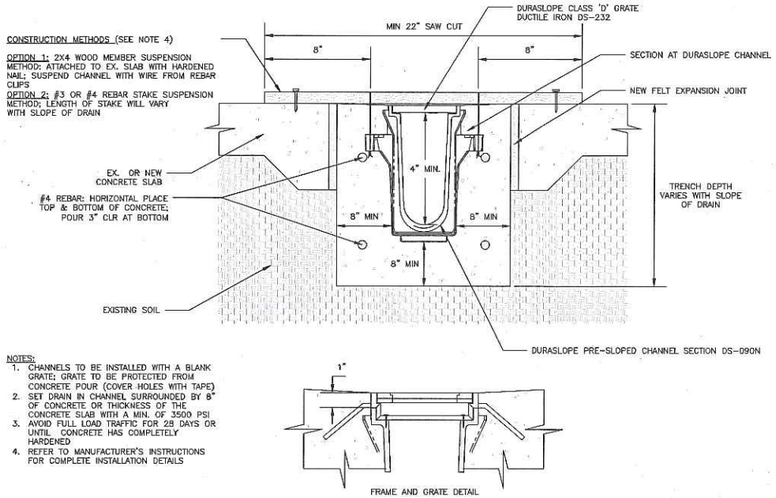
DESIGNED BY:	WHS
DRAWN BY:	MAC
CHECKED BY:	WHS

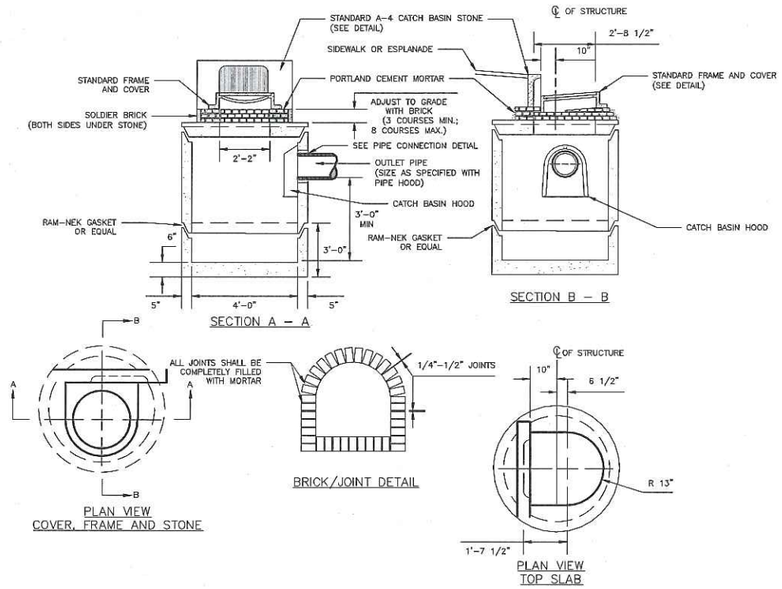
STATE OF MAINE
WILLIAM H SAVAGE
No. 11419
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-□□



DURASLOPE CLASS D TRENCH DRAIN INSTALLATION

NOT TO SCALE

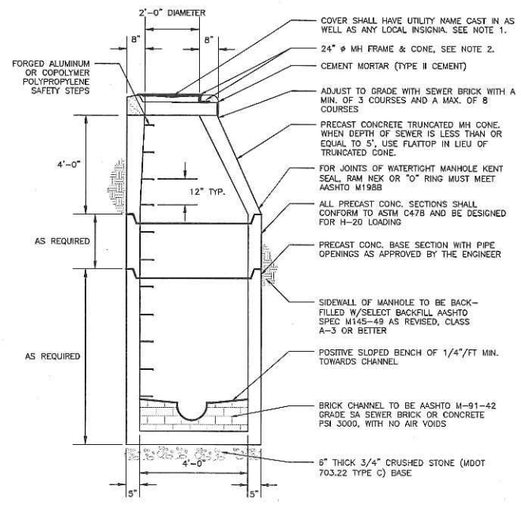


CITY OF PORTLAND PRECAST CONCRETE CATCH BASIN

NOT TO SCALE

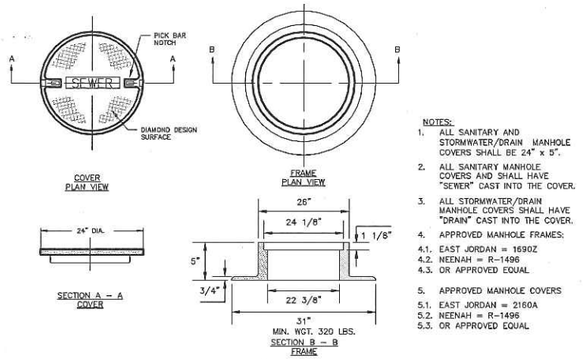
NOTES:

1. MANHOLE COVER FOR SEWER MANHOLE SHALL BE ENGRAVED "SEWER", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960002 AS MANUFACTURED BY NEENAH FOUNDRY. MANHOLE COVER FOR STORM SEWER SHALL BE ENGRAVED "DRAIN", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960003 AS MANUFACTURED BY NEENAH FOUNDRY.
2. MANHOLE FRAME SHALL BE EITHER ITEM # 14960001, AS MANUFACTURED BY NEENAH FOUNDRY, OR ITEM # 1960Z, AS MANUFACTURED BY EAST JORDAN CO.
3. WITHIN CITY OF PORTLAND ROW, STORM DRAIN MANHOLE SHALL CONFORM WITH "STANDARD PRECAST SEWER MANHOLE DETAIL", WITH THE EXCEPTION THAT THE COVER SHALL BE MARKED AS "DRAIN". REFER TO CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 – SANITARY SEWER AND STORM DRAIN, FIGURE II-1
4. SUBMITTAL REQUIRED FOR MANHOLES, MANHOLE FRAMES & MANHOLE COVERS



STANDARD PRECAST SEWER MANHOLE

NOT TO SCALE



NOTES:

1. ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".
2. ALL SANITARY MANHOLE COVERS AND SHALL HAVE "SEWER" CAST INTO THE COVER.
3. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
4. APPROVED MANHOLE FRAMES:
   - 4.1. EAST JORDAN = 1690Z
   - 4.2. NEENAH = R-1496
   - 4.3. OR APPROVED EQUAL
5. APPROVED MANHOLE COVERS
   - 5.1. EAST JORDAN = 2160A
   - 5.2. NEENAH = R-1496
   - 5.3. OR APPROVED EQUAL

CAST IRON MANHOLE COVER AND FRAME

NOT TO SCALE

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

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PC DD SET	WHS 8/7/15
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REVISION	REV. DATE

DRAWING NAME: DRAINAGE DETAILS 2

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8818 PORTLAND, ME 04104

ACORN ENGINEERING, INC.

158 DANFORTH STREET, PORTLAND MAINE 04102 (207) 775-2655

FILE:	1060_DETAILS
DATE:	4/20/2015
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DESIGNED BY:	WHS
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CHECKED BY:	WHS

STATE OF MAINE WILLIAM H SAVAGE No. 11419 9-15-15 LICENSED PROFESSIONAL ENGINEER

DRAWING NO. C-□□

Plan 12

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 VERNON PLACE, AVON STREET, AND CONGRESS STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.1 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.
- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% F THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.
- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL RETAINING AND FOUNDATION WALLS TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN AVON.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

TEMPORARY SEEDING PLAN

SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P2O5–K2O) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

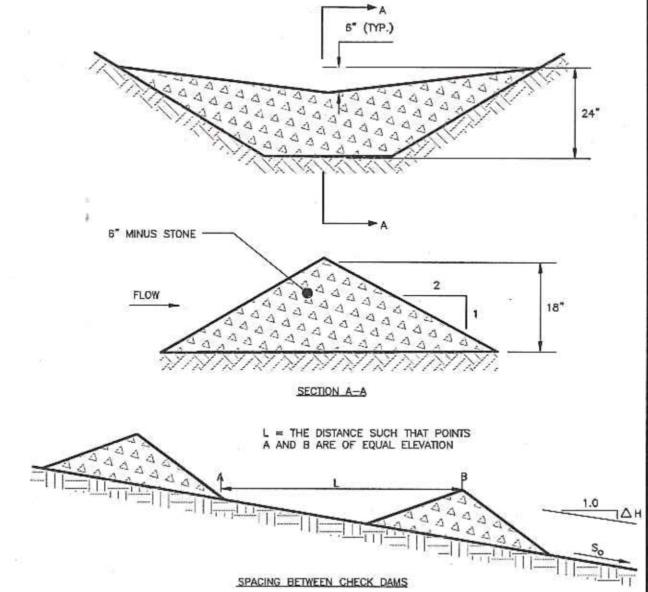
MULCHING

MULCH SHALL BE APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT.

CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION



SPACING BETWEEN CHECK DAMS

S_o (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAM

NOT TO SCALE

NOTES:

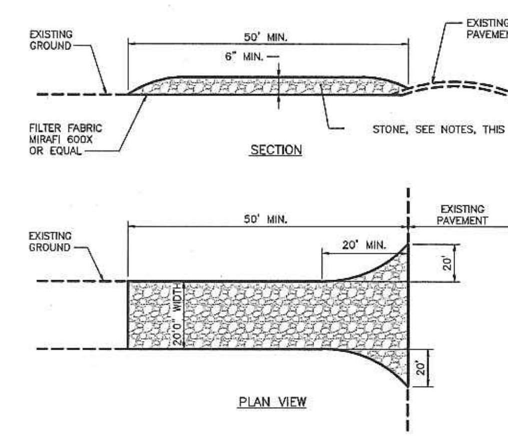
1) CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

2) STONE SHALL BE 2"–3" COARSE AGGREGATE

3) CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.

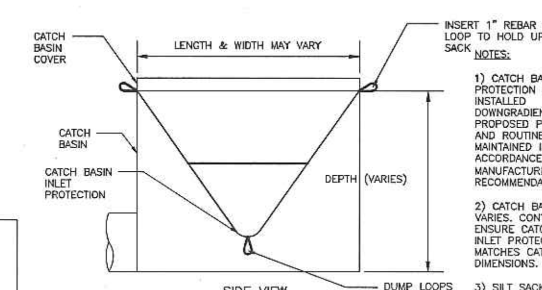
4) WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.

5) CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY



STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:

1) CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

2) CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.

3) SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION

NOT TO SCALE

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. / DATE

DRAWING NAME: EROSION & SEDIMENT CONTROL DETAILS

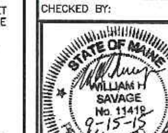
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775–2655

FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS



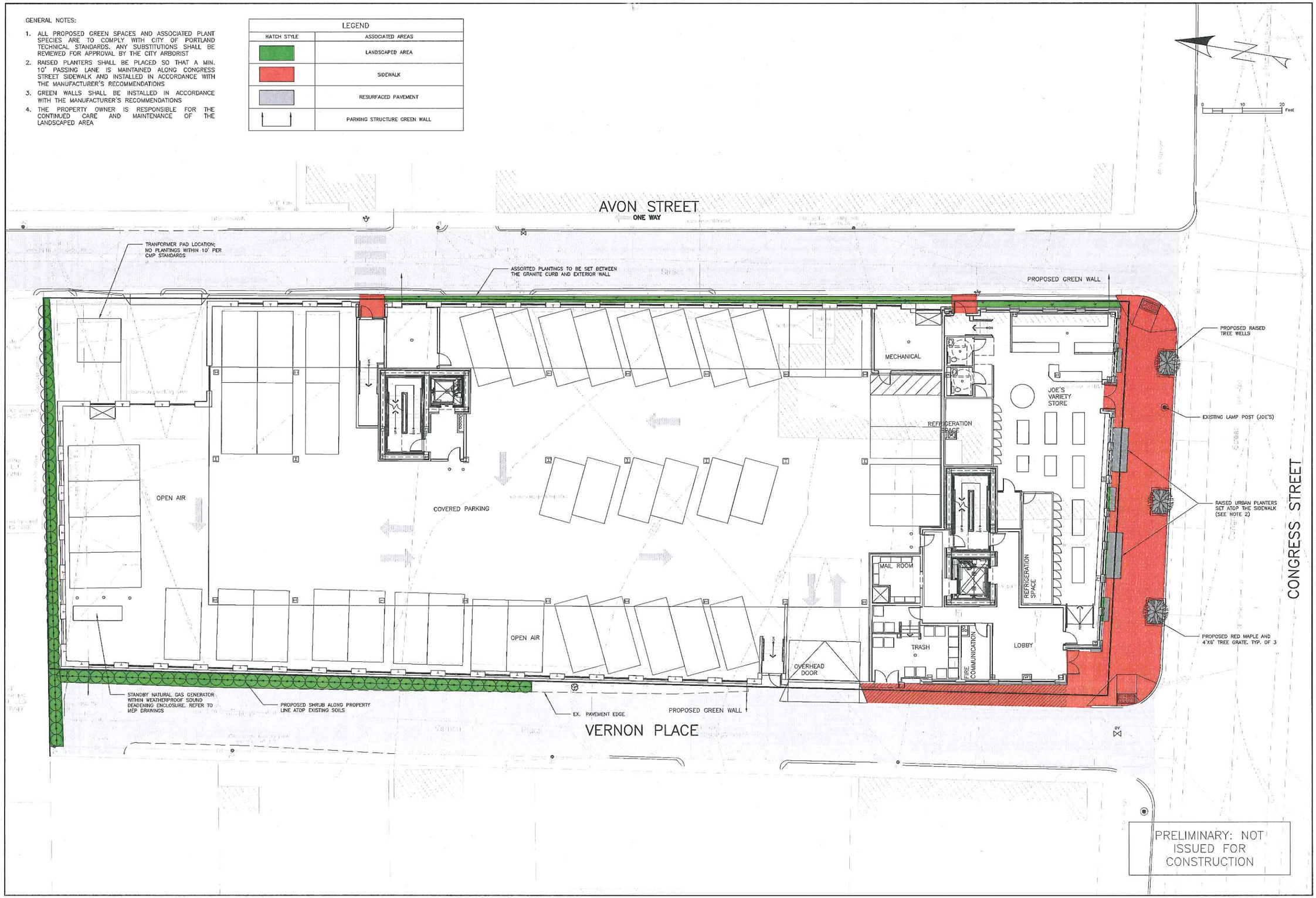
DRAWING NO.

C-

GENERAL NOTES:

1. ALL PROPOSED GREEN SPACES AND ASSOCIATED PLANT SPECIES ARE TO COMPLY WITH CITY OF PORTLAND TECHNICAL STANDARDS. ANY SUBSTITUTIONS SHALL BE REVIEWED FOR APPROVAL BY THE CITY ARBORIST
2. RAISED PLANTERS SHALL BE PLACED SO THAT A MIN. 10' PASSING LANE IS MAINTAINED ALONG CONGRESS STREET SIDEWALK AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
3. GREEN WALLS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
4. THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUED CARE AND MAINTENANCE OF THE LANDSCAPED AREA

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	LANDSCAPED AREA
	SIDEWALK
	RESURFACED PAVEMENT
	PARKING STRUCTURE GREEN WALL



PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
COMMENT/RESPONSE	WHS	9/15/15
REVISION	REV.	DATE

DRAWING NAME: LANDSCAPE PLAN

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

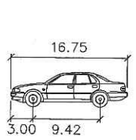
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8516 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	9/11/15
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

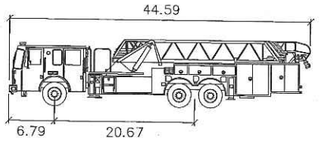
STATE OF MAINE WILLIAM H SAVAGE No. 11411 9-15-15 LICENSED PROFESSIONAL ENGINEER

DRAWING NO. L-1



Composite Passenger Vehicle

Width	: 6.33
Track	: 6.33
Lock to Lock Time	: 6.0
Steering Angle	: 26.4



Smeal Aerial MM 100ft

	feet
Width	: 8.17
Track	: 7.75
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

ISSUED FOR	BY DATE
COMMENT/RESPONSE	WHS 9/15/15
REVISION	REV. DATE

DRAWING NAME: CIRCULATION PLAN: BASEMENT

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.

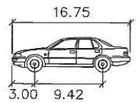
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2355

FILE:	1060_CONGRESS
DATE:	9/15/15
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 13416
9-15-15
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
1

Plan 15



Composite Passenger Vehicle

Width	: 6.33
Track	: 6.33
Lock to Lock Time	: 6.0
Steering Angle	: 26.4

AVON STREET
ONE WAY

CONGRESS STREET

VERNON PLACE

Composite Passenger Vehicle
ARCHITECTURAL

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY
COMMENT/RESPONSE	DATE
	WHS

REVISION	REV.
	DATE

DRAWING NAME: CIRCULATION PLAN: FIRST FLOOR

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	9/15/15
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	WHS
DRAWN BY:	WHS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H SAVAGE
No. 11415
9-15-15
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.

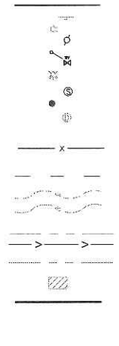
667 CONGRESS STREET REDEVELOPMENT

REDFERN PROPERTIES, LLC
PORTLAND, MAINE

LEGEND:

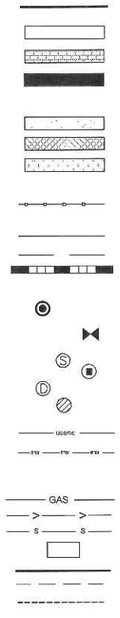
EXISTING

REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION



STRIPING	
BUILDING (SECOND FLOOR)	
BRICK SIDEWALK	
GREEN SPACE	
EDGE OF EX. PAVEMENT	
RESURFACED PAVEMENT	
RECONSTRUCTED ROAD	
UTILITY PAVEMENT CUTS	
SEDIMENTATION BARRIER	
UNDERGROUND CONDUIT	
UNDERDRAIN	
CURB	
SIGN	
LAMP OR LIGHT POLE	
UTILITY POLE	
GUY WIRE	
WATER VALVE	
FIRE HYDRANT	
SEWER MANHOLE	
CATCH BASIN	
DRAIN MANHOLE	
FIELD INLET	
OVERHEAD UTILITY LINE	
UNDERGROUND ELECTRIC LINE	
UNDERGROUND WATER LINE	
MINOR CONTOURS (1FT EX., 0.5FT PROP.)	
MAJOR CONTOURS (5FT)	
GAS LINE	
STORM DRAIN LINE	
SEWER LINE	
EXISTING/PROPOSED BUILDING	
PROPERTY LINE	
FOUNDATION DRAIN	
ROOF DRAIN	

PROPOSED



INDEX:

CALL BEFORE YOU DIG
1-888-DIG-SAFE
1-888-344-7233

UTILITIES

SEWER:

PUBLIC SERVICES ENGINEERING DEPARTMENT
55 PORTLAND STREET
PORTLAND, MAINE 04101
CONTACT: DAVID MARGOLIS-PINEO
(207) 874-8850

WATER:

PORTLAND WATER DISTRICT
225 DOUGLAS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: GLISSEN HAVU, E.I.
(207) 761-8310

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: JAMIE COUGH
(207) 842-2367

TELEPHONE:

FAIRPOINT COMMUNICATIONS
45 FOREST AVE
PORTLAND MAINE 04101
CONTACT: SCOTT DERRIG
(207) 797-1866

CABLE:

TIME WARNER CABLE
118 JOHNSON ROAD
PORTLAND, MAINE, 04102
CONTACT: MARK PELLETIER
(877) 546-0962

NATURAL GAS:

UNITIL SERVICE CORP
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: KELLY FOWLER
(207) 541-2536

PROJECT TEAM

DEVELOPER:

REDFERN PROPERTIES LLC
PORTLAND, MAINE
CONTACT: JONATHAN CULLEY
(207) 776-9715

OWNER'S REPRESENTATIVE:

CORDJIA CAPITAL PROJECTS GROUP
PORTLAND, MAINE
CONTACT: BLAINE M. BUCK, A.I.A., P.E.
(207) 236-9970

ARCHITECT:

RYAN SENATORE ARCHITECTURE
PORTLAND, MAINE
CONTACT: RYAN SENATORE, MAINE LICENSED ARCHITECT
(207) 650-6414

SURVEYOR:

TITCOMB SURVEY
PORTLAND, MAINE
CONTACT: REX CROTEAU, P.L.S.
(207) 878-7870

GEOTECHNICAL ENGINEER:

SUMMIT GEDENGINEERING SERVICES, INC.
LEWISTON, MAINE
CONTACT: BILL PETERLEIN, P.E.
(207) 576-3313

STRUCTURAL ENGINEER:

STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC.
PORTLAND, MAINE
CONTACT: AARON JONES, P.E.
(207) 774-4614

CONSTRUCTION MANAGEMENT CO.:

PC CONSTRUCTION COMPANY
PORTLAND, MAINE
CONTACT: TODD RIORDAN
(802) 651-1239

TRAFFIC ENGINEER:

TRAFFIC SOLUTIONS
PORTLAND, MAINE
CONTACT: BILL BRAY, P.E.
(207) 774-3603

M.E.P. ENGINEER:

ALLIED ENGINEEERING
PORTLAND, MAINE
CONTACT: IAN MACDONALD, P.E., LEED AP, HCDP
(207) 221-2260

FIRE ENGINEER:

FIRE RISK MANAGEMENT, INC.
BATH, MAINE
CONTACT: MARK CUMMINGS, P.E.
(207) 442-7200

ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CM	CONSTRUCTION MANAGER
CONC.	CONCRETE
CUBIC YARD	CY
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
GAL.	GALVANIZED
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC

FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
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COMMENT/RESPONSE	WHS 9/15/15
FINAL SUBMISSION	WHS 10/13/15
REVISION	REV. / DATE

DRAWING NAME: COVER SHEET
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2835

FILE:	1060_DETAILS
DATE:	4/16/2015
JN:	1060
SCALE:	NTS
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DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
10-13-15
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS STAMPED "AS-BUILT".
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY AND TOPOGRAPHIC FROM THE PLAN TITLED EXSTING CONDITIONS SURVEY BY TITCOMB SURVEYING FOR REDFERN PROPERTIES, DATED APRIL 6TH, 2015.
8. SUBSURFACE DATA HAVE BEEN OBTAINED BY SUMMIT GEOENGINEERING SERVICES, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
10. CONSTRUCTION MANAGEMENT PLAN DATED SEPTEMBER 11TH, 2015 BY THE PC CONSTRUCTION SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS, AS WELL AS SITE DRAINAGE, SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.
2. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT.
3. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.
4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.
5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
6. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINE ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
7. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
9. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY REDFERN AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, OR ELEVATION AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO THEIR ORIGINAL LOCATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE.
6. CONTRACTOR TO ENSURE THAT DRIVEWAYS AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY LOAM WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. SEE BORING LOGS FOR ADDITIONAL INFORMATION.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST GEOTECHNICAL REPORT PREPARED BY THE PROJECT GEOTECHNICAL ENGINEER.
6. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.
7. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.
8. A POST CONSTRUCTION – STORMWATER INSPECTION & MAINTENANCE PLAN IS FILED WITH THE CITY OF PORTLAND.
9. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
10. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
5. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR TO BYPASS EXISTING SEWER FLOW CONTROL AT CONNECTION TO EXISTING SYSTEM AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES.
4. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR-16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.
5. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
6. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
7. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET C-42.
8. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT "WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURES", MOST RECENT REVISION.
9. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
10. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
11. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
13. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.
14. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.
15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.
16. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

DEMOLITION NOTES:

1. THE EXISTING ASPHALT SHOULD BE STRIPPED AND EITHER PROCESSED ONSITE, REMOVED FROM THE SITE OR DISPOSED OF ONSITE.
2. REFER TO THE BORING LOGS OBTAINED BY SUMMIT GEOENGINEERING SERVICES FOR REDFERN PROPERTIES, LLC. FOR ADDITIONAL INFORMATION.
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

FINAL: ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
FINAL SUBMISSION	WHS 10/13/15

REVISION	REV. / DATE

DRAWING NAME: NOTES SHEET

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

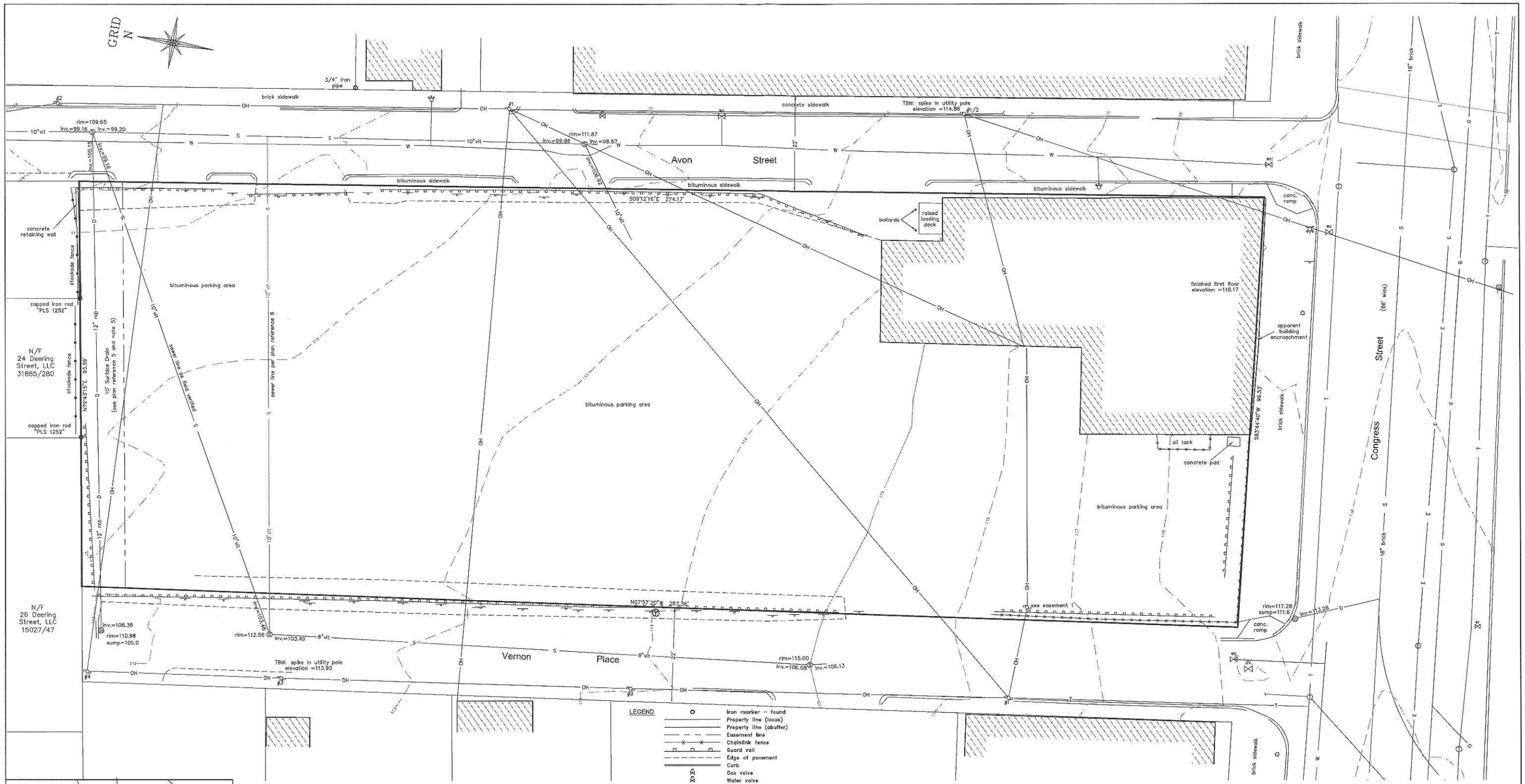
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

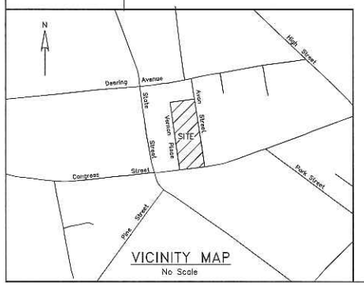
ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_DETAILS
DATE:	4/16/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
[signature]
WILLIAM H. SAVAGE
No. 11419
10-13-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-02





NOTES

1) Book and Page references are to the Cumberland County Registry of Deeds.

2) Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

3) Elevations are based on City of Portland datum.

4) Utility information on this plan is approximate, based on location of visible features and information contained on plans and drawings provided by others. DigSafe and/or the appropriate utilities should be contacted prior to any construction.

5) The 10' Surface Drain shown is described in an acceptance by order of the City Council passed November 5, 1951, City of Portland Records, Volume 70, Page 508 and depicted on Plan Reference 5 herein. No recorded deed found, prescriptive rights may exist.

PLAN REFERENCES

1) Plan of Property at Portland made for Saint Stephen Church by H.J. & E.C. Jordan Civil Engineers dated June, 1947.

2) Condominium Plan made for Maryellen Sullivan by Northeast Civil Solutions dated October 20, 2006 recorded in Plan Book 207, Page 390.

3) Condominium Plat Deering Heights Condominiums made for 24 Deering Street, LLC by Owen Haskell, Inc. recorded in Plan Book 215, Page 49.

4) Right of way plans provided by the City of Portland Public Services Engineering Department.

5) City of Portland, Maine Department of Public Works Vernon Place Surface Water Drain dated November 21, 1951, file number 638/14.

6) City of Portland, Maine Department of Public Works Vernon Place New Sewer (Private) dated March 11, 1934, file number 409/56.

EASEMENTS / ENCUMBRANCES

1) Overhead utility easement conveyed by Joseph L. Discatio and Mary J. Discatio to Central Maine Power Company and New England Telephone and Telegraph Company recorded in Book 3892, Page 160.

AREA

26,127 square feet / 0.60 acres

CERTIFCATION

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

Rex J. Croteau, P.L.S. #2273

STATE OF MAINE REX J. CROTEAU #2273 PROFESSIONAL LAND SURVEYOR

OWNERS OF RECORD

MSD Properties, LLC
P.O. Box 8816 Portland, Maine
Book 30720, Page 250

PLAN OF
Existing Conditions Survey
665 Congress Street Portland, Maine

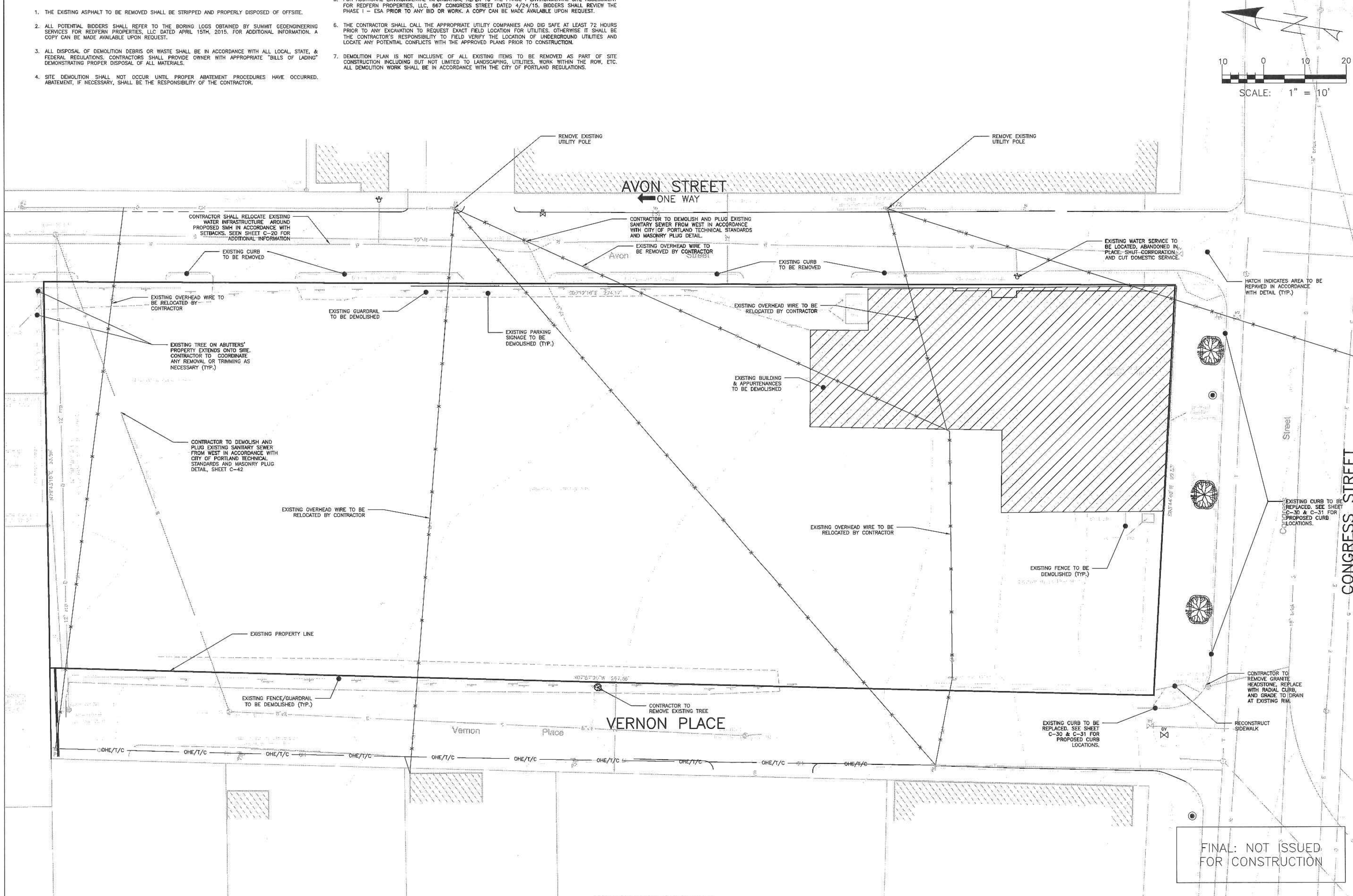
MADE FOR
Redfern Properties
P.O. Box 8816 Portland, Maine

JOB #215017	DATE: April 6, 2015	SCALE: 1" = 10'
BOOK #810		
215017.dwg		
FILE #9772		

Titcomb Associates
133 Gray Road, Falmouth, Maine 04105
(207)797-9199 www.titcombsurvey.com

DEMOLITION NOTES:

1. THE EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL POTENTIAL BIDDERS SHALL REFER TO THE BORING LOGS OBTAINED BY SUMMIT GEOENGINEERING SERVICES FOR REDFERN PROPERTIES, LLC DATED APRIL 15TH, 2015. FOR ADDITIONAL INFORMATION. A COPY CAN BE MADE AVAILABLE UPON REQUEST.
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. FOR ADDITIONAL ENVIRONMENTAL INFORMATION, REFER TO THE PHASE I ENVIRONMENTAL SITE ASSESSMENT FOR REDFERN PROPERTIES, LLC, 667 CONGRESS STREET DATED 4/24/15. BIDDERS SHALL REVIEW THE PHASE I – ESA PRIOR TO ANY BID OR WORK. A COPY CAN BE MADE AVAILABLE UPON REQUEST.
6. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
7. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.


10 0 10 20
SCALE: 1" = 10'
AVON STREET
ONE WAY
REMOVE EXISTING UTILITY POLE
REMOVE EXISTING UTILITY POLE
CONTRACTOR SHALL RELOCATE EXISTING WATER INFRASTRUCTURE AROUND PROPOSED SMH IN ACCORDANCE WITH SETBACKS. SEEN SHEET C-20 FOR ADDITIONAL INFORMATION
CONTRACTOR TO DEMOLISH AND PLUG EXISTING SANITARY SEWER FROM WEST IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS AND MASONRY PLUG DETAIL.
EXISTING OVERHEAD WIRE TO BE REMOVED BY CONTRACTOR
EXISTING CURB TO BE REMOVED
EXISTING CURB TO BE REMOVED
EXISTING WATER SERVICE TO BE LOCATED, ABANDONED IN PLACE, SHUT CORPORATION AND CUT DOMESTIC SERVICE.
HATCH INDICATES AREA TO BE REPAVED IN ACCORDANCE WITH DETAIL (TYP.)
EXISTING OVERHEAD WIRE TO BE RELOCATED BY CONTRACTOR
EXISTING GUARDRAIL TO BE DEMOLISHED
EXISTING PARKING SIGNAGE TO BE DEMOLISHED (TYP.)
EXISTING OVERHEAD WIRE TO BE RELOCATED BY CONTRACTOR
EXISTING TREE ON ABUTTERS' PROPERTY EXTENDS ONTO SITE. CONTRACTOR TO COORDINATE ANY REMOVAL OR TRIMMING AS NECESSARY (TYP.)
EXISTING BUILDING & APPURTENANCES TO BE DEMOLISHED
CONTRACTOR TO DEMOLISH AND PLUG EXISTING SANITARY SEWER FROM WEST IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS AND MASONRY PLUG DETAIL, SHEET C-42
EXISTING OVERHEAD WIRE TO BE RELOCATED BY CONTRACTOR
EXISTING OVERHEAD WIRE TO BE RELOCATED BY CONTRACTOR
EXISTING CURB TO BE REPLACED. SEE SHEET C-30 & C-31 FOR PROPOSED CURB LOCATIONS.
EXISTING FENCE TO BE DEMOLISHED (TYP.)
CONGRESS STREET
EXISTING PROPERTY LINE
CONTRACTOR TO REMOVE GRANITE HEADSTONE, REPLACE WITH RADIAL CURB, AND GRADE TO DRAIN AT EXISTING RIM.
EXISTING FENCE/GUARDRAIL TO BE DEMOLISHED (TYP.)
CONTRACTOR TO REMOVE EXISTING TREE
VERNON PLACE
EXISTING CURB TO BE REPLACED. SEE SHEET C-30 & C-31 FOR PROPOSED CURB LOCATIONS.
RECONSTRUCT SIDEWALK
OHE/T/C
FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
COMMENT/RESPONSE	WHS 9/15/15
FINAL APPLICATION	WHS 10/13/15

REVISION	REV. / DATE

DRAWING NAME: DEMOLITION PLAN

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	8/28/15
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 10-13-15 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.

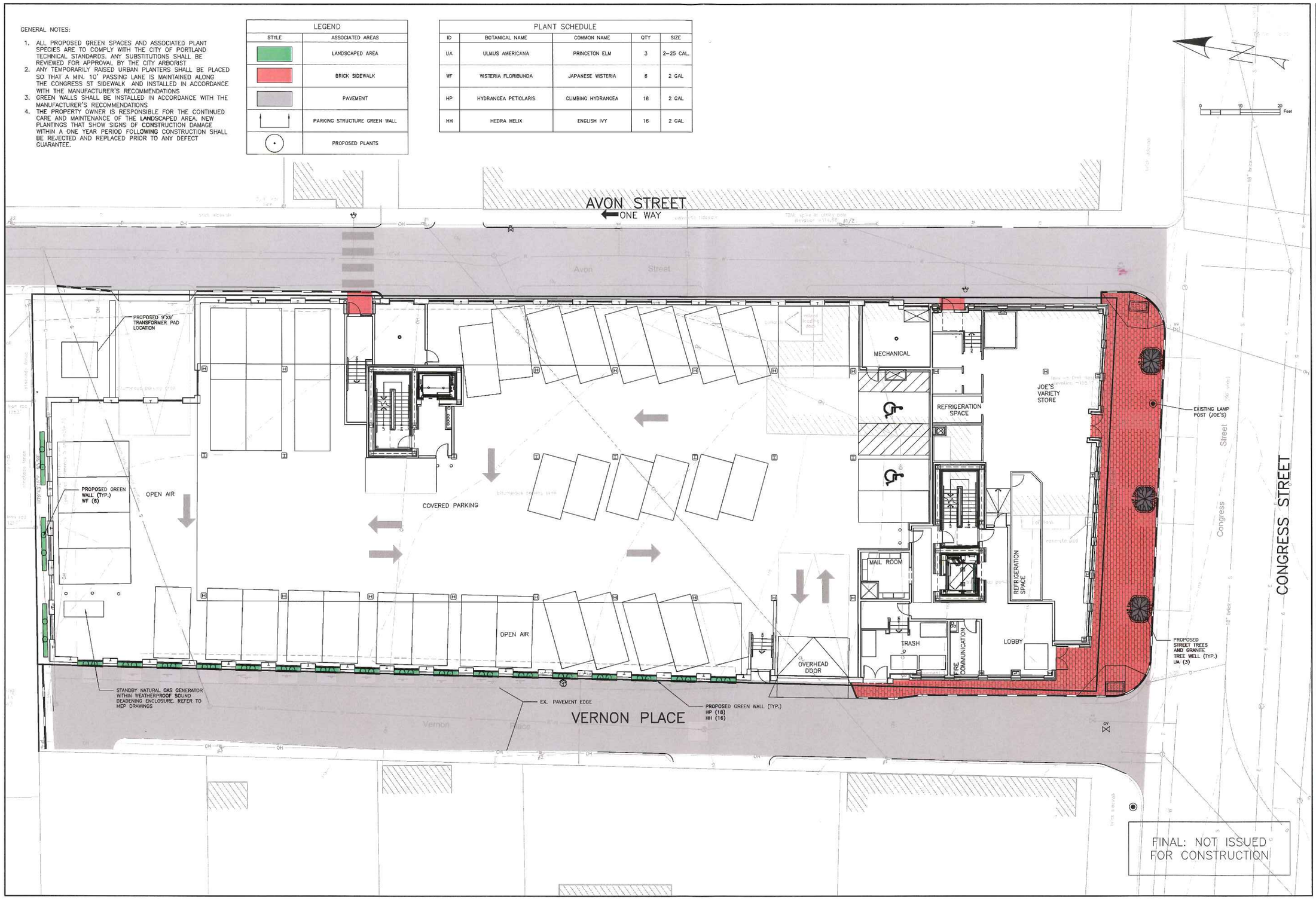
C-03

GENERAL NOTES:

1. ALL PROPOSED GREEN SPACES AND ASSOCIATED PLANT SPECIES ARE TO COMPLY WITH THE CITY OF PORTLAND TECHNICAL STANDARDS. ANY SUBSTITUTIONS SHALL BE REVIEWED FOR APPROVAL BY THE CITY ARBORIST
2. ANY TEMPORARILY RAISED URBAN PLANTERS SHALL BE PLACED SO THAT A MIN. 10' PASSING LANE IS MAINTAINED ALONG THE CONGRESS ST SIDEWALK AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
3. GREEN WALLS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
4. THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUED CARE AND MAINTENANCE OF THE LANDSCAPED AREA. NEW PLANTINGS THAT SHOW SIGNS OF CONSTRUCTION DAMAGE WITHIN A ONE YEAR PERIOD FOLLOWING CONSTRUCTION SHALL BE REJECTED AND REPLACED PRIOR TO ANY DEFECT GUARANTEE.

LEGEND	
STYLE	ASSOCIATED AREAS
	LANDSCAPED AREA
	BRICK SIDEWALK
	PAVEMENT
	PARKING STRUCTURE GREEN WALL
	PROPOSED PLANTS

PLANT SCHEDULE				
ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
UA	ULMUS AMERICANA	PRINCETON ELM	3	2-25 CAL.
WF	WISTERIA FLORIBUNDA	JAPANESE WISTERIA	6	2 GAL
HP	HYDRANGEA PETIOLARIS	CLIMBING HYDRANGEA	18	2 GAL
HH	HEDRA HELIX	ENGLISH IVY	16	2 GAL



ISSUED FOR	BY DATE
COMMENT/RESPONSE	WHS 9/15/15
FINAL APPLICATION	WHS 10/13/15

REVISION	REV. DATE

DRAWING NAME: LANDSCAPE PLAN

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8516 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
159 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	9/11/15
J/N:	1060
SCALE:	1"=10'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

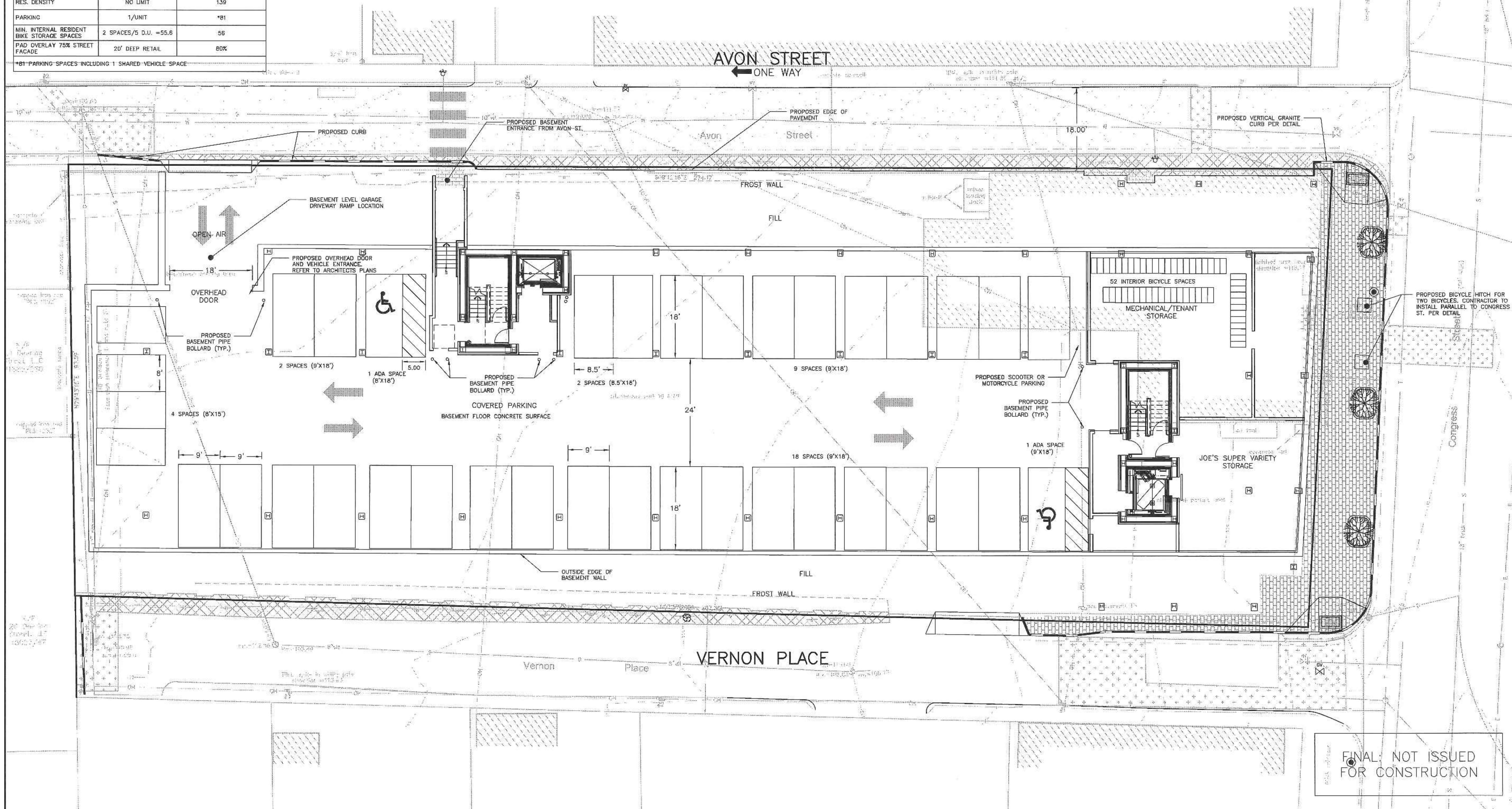
STATE OF MAINE
WILLIAM H. SAVAGE
No. 11416
10-13-15
REGISTERED LANDSCAPE ARCHITECT

DRAWING NO.
L-1

SPACE AND BULK STANDARDS		
ZONE: B3	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	26,126 SF
MINIMUM STREET FRONTAGE	15'	87'
STREET WALL LINE MAX SETBACK	5'	2'
MIN YARD DIMENSIONS	NONE	–
MIN LOT WIDTH	NONE	–
MAX LOT COVERAGE	100%	100%
MAX BLANK FACADE (CONGRESS ONLY)	15'	3'
MAX. BLANK FACADE (VERNON/AVON ONLY)	30'	12'
MAXIMUM BUILDING HEIGHT	85'	85' FROM AVERAGE GRADE
MAXIMUM STREET WALL	65'	65'
MIN BLG HEIGHT WITHIN 50' OF STREET	35'	65'
RES. DENSITY	NO LIMIT	139
PARKING	1/UNIT	*81
MIN. INTERNAL RESIDENT BIKE STORAGE SPACES	2 SPACES/5 D.U. =55.6	56
PAD OVERLAY 75% STREET FACADE	20' DEEP RETAIL	80%

*81 PARKING SPACES INCLUDING 1 SHARED VEHICLE SPACE

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
8X15	4
8.5X15	2
9X18	29
ADA 8X18	2
TOTAL SPACES	37



FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
FINAL APPLICATION	WHS 10/13/15
REVISION	REV. DATE

DRAWING NAME: SITE PLAN: BASEMENT

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
10-13-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.

C-10

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
8.5X15	6
8X18	1
8.5X18	13
9X18	22
ADA 8X18	2
TOTAL SPACES	44

GENERAL NOTES:

1. 1.25" SURFACE PAVEMENT TO BE REPLACED FOR AVON STREET AND VERNON PLACE ADJACENT TO PROJECT, FOR THE FULL WIDTH OF PROJECT. EXISTING PAVEMENT TO BE MILLED. STRUCTURES WITHIN ROADWAY SHALL BE ADJUSTED AS NECESSARY.
2. ZONING ANALYSIS COMPLETED BY RYAN SENATORE ARCHITECTURE.
3. CONTRACTOR SHALL PLACE NEW CURBING IN LOCATIONS AS NOTED WITHOUT EXISTING CURBING, IN ACCORDANCE WITH DETAIL. EXISTING TIPDOWNS ARE LOCATED AT ALL CURB CUTS. FOR PURPOSES OF BIDDING, CONTRACTOR SHALL NOTE THAT ALL TIPDOWNS SHALL BE RECONSTRUCTED IN ACCORDANCE WITH DETAIL, AND THAT EXISTING TIPDOWNS MAY NOT MEET CITY OF PORTLAND STANDARD.
4. INTERIOR STRIPING AS INDICATED ON SITE PLAN SHALL BE 4" WIDE. STRIPING SHALL BE WHITE UNLESS OTHERWISE NOTED ON SITE PLANS OR DETAILS.
5. ON-STREET PARKING DELINEATION IS FOR GRAPHIC REPRESENTATION ONLY AND NOT FOR CONSTRUCTION.

LEGEND	
HATCH STYLE	ASSOCIATED AREAS
	PROPOSED BRICK SIDEWALK
	UTILITY PAVEMENT CUTS
	EXISTING PAVEMENT TO BE RESURFACED (NOTE 1)
	LOCAL PAVEMENT PROFILE RECONSTRUCTION (TYP.)

0 10 20 Feet

AVON STREET
ONE WAY

EX. SIDWALK AND CURB TO REMAIN
EX. UTILITY POLE TO REMAIN
PROPOSED RAISED SIDEWALK PER DETAIL
EXISTING TREE ON PROPERTY LINE EXTENDS ONTO SITE. CONTRACTOR TO COORDINATE ANY REMOVAL OR TRIMMING AS NECESSARY (TYP.)
EXISTING CURB TO BE REMOVED
PROPOSED 16.00
EXISTING 14.42
Avon Street
15'
PROPOSED 16.00
EXISTING 14.14
PROPOSED GRANITE STREET MONUMENT AT PROPERTY CORNER (PER CITY TECHNICAL STANDARDS), TYP. SEE DETAIL.
PROPOSED PAVEMENT SAWCUT (TYP.)
PROPOSED CURB TIPDOWN (TYP.)
10' RADIUS AT CURB
10'
PROPOSED 6'X8' TRANSFORMER PAD LOCATION
STAIRWELL & ELEVATOR LOCATION
8 SPACES (8.5'X18')
75'
EXISTING BUILDING TO BE DEMOLISHED
2 SPACES (9'X18')
BARRIER FREE PARKING SIGN (TYP.)
MECHANICAL
REFRIGERATION SPACE
JOE'S VARIETY STORE
PROPOSED SIDEWALK RAMP WITH DETECTABLE PANEL.
FLUSH GRANITE AT RAMP WIDTH
EXISTING LIMIT OF PARKING SIGN; EXISTING 30 MINUTE VEHICLE LOADING ZONE
EXISTING LAMP POST (JOE'S)
PROPOSED FIRST FLOOR ENTRANCE TO FACILITY
PROPOSED BICYCLE HITCH FOR TWO BICYCLES. CONTRACTOR TO INSTALL PARALLEL TO CONGRESS ST. PER DETAIL
17.83'
PROPOSED PARKING SPACE (TYP.)
PROPOSED ADA PARKING SPACE (TYP.)
18.65'
EXISTING FENCE TO BE DEMOLISHED (TYP.)
3 SPACES (8'X18')
STAIRWELL AND ELEVATOR LOCATION
4 SPACES (9'X18')
OPEN AIR
6 SPACES (9'X18')
TANDEM PARKING (TYP.)
1 SPACE (9'X18')
PROPOSED FIRST FLOOR SURFACE MOUNT PIPE BOLLARD (TYP.)
COVERED PARKING
FIRST FLOOR CONCRETE SURFACE
6 SPACES (8.5'X15')
EDGE OF FIRST FLOOR GARAGE (TYP.)
25.59'
17.83'
PROPOSED COLUMN, SEE ARCHITECTURAL PLAN (TYP.)
9 SPACES (9'X18')
5 SPACES (8.5'X18')
FIRST FLOOR GARAGE DRIVEWAY RAMP LOCATION
MAIL ROOM
9'
Congress
22'
EXISTING PARKING SPACE (TO REMAIN)
PROPOSED STREET TREES AND RAISED GRANITE TREE WELL (TYP.)
EX. SIDEWALK TO BE REPLACED
10' RADIUS AT CURB
PROPOSED CURB TIPDOWN (TYP.)
PROPOSED SIDEWALK RAMP WITH DETECTABLE PANEL.
FLUSH GRANITE AT RAMP WIDTH
PROPOSED CURB TIPDOWN (TYP.)
CONGRESS STREET
18'
OVERHEAD DOOR
TRASH
FIRE COMMUNICATION
PROPOSED GRANITE STREET MONUMENT LOCATED PROPERTY CORNER (PER CITY TECHNICAL STANDARDS), TYP.
REFRIGERATION SPACE
PROPERTY BOUNDARY
EXISTING FENCE TO BE DEMOLISHED (TYP.)
PROPOSED PLANTINGS, SEE LANDSCAPING PLAN.
PROPOSED 18' VERTICAL GRANITE CURB
EX. PAVEMENT EDGE
EXISTING 14.85
PROPOSED 18.50
REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING MOUNTED STREET LIGHTS
CONTRACTOR TO REMOVE EXISTING TREE
VERNON PLACE
Vernon Place
19.03'
PROPOSED FIRST FLOOR PARKING GARAGE ENTRANCE FOR PEDESTRIANS
4.00'
PROPOSED 7" TIPDOWN
EXISTING 14.18
PROPOSED 16.80
PROPOSED FLUSH GRANITE CURB
3.89'
EX. CURB AND SIDEWALK (TO REMAIN)
PROPOSED OVERHEAD DOOR AND FIRST FLOOR VEHICLE ENTRANCE. REFER TO ARCHITECTS PLANS

FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APPLICATION	WHS 7/30/13
PC DD SET	WHS 8/7/13
PC PROGRESS SET	WHS 8/21/13
COMMENT/RESPONSE	WHS 9/15/15
FINAL APPLICATION	WHS 10/13/15
REVISION	REV. DATE

DRAWING NAME: SITE PLAN: FIRST FLOOR
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8816 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAC
DRAWN BY:	MAC
CHECKED BY:	WHS

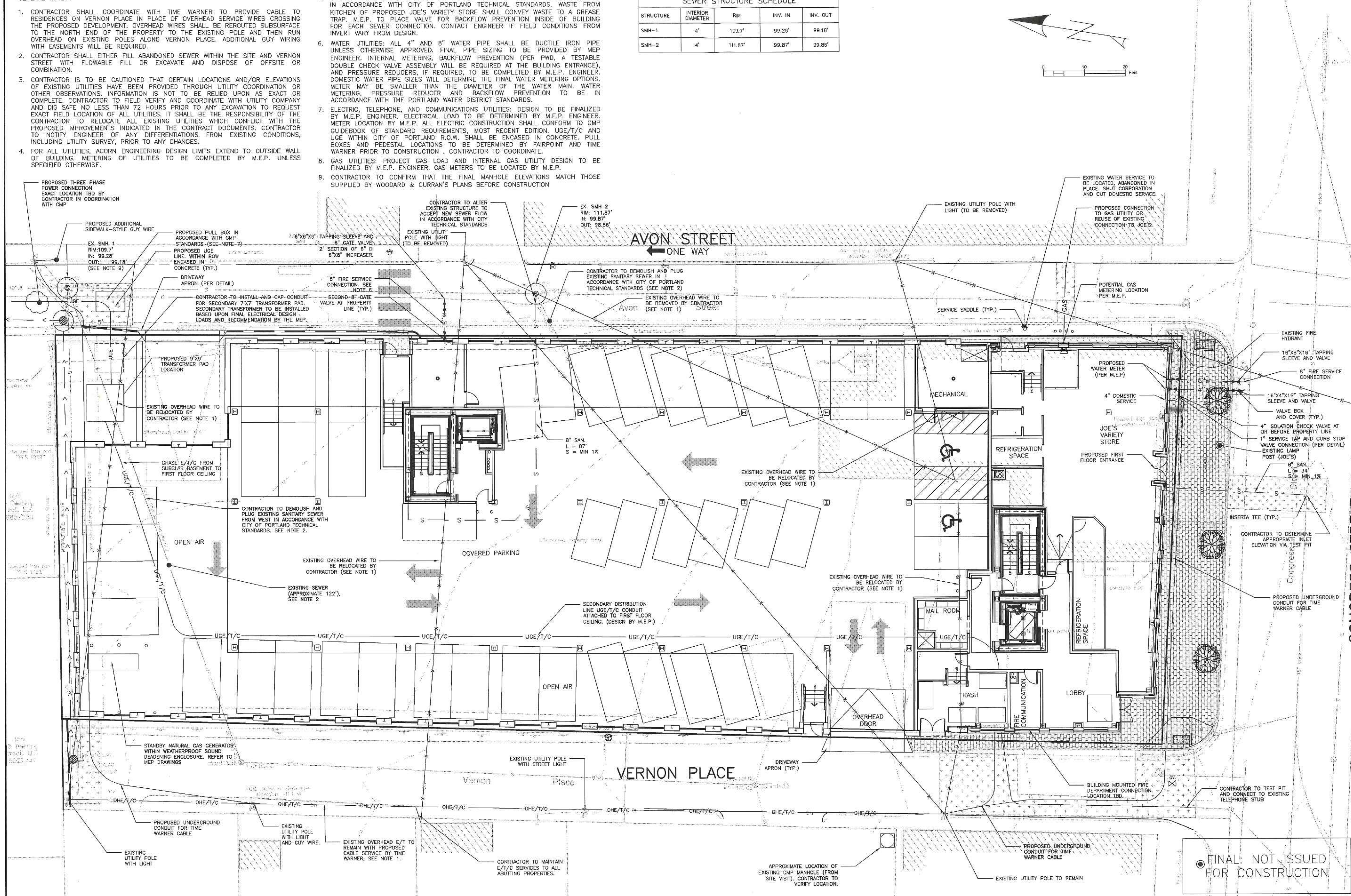
STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
10-13-15
REGISTERED ENGINEER

DRAWING NO.
C-11

GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE WITH TIME WARNER TO PROVIDE CABLE TO RESIDENCES ON VERNON PLACE IN PLACE OF OVERHEAD SERVICE WIRES CROSSING THE PROPOSED DEVELOPMENT. OVERHEAD WIRES SHALL BE REROUTED SUBSURFACE TO THE NORTH END OF THE PROPERTY TO THE EXISTING POLE AND THEN RUN OVERHEAD ON EXISTING POLES ALONG VERNON PLACE. ADDITIONAL GUY WIRING WITH EASEMENTS WILL BE REQUIRED.
2. CONTRACTOR SHALL EITHER FILL ABANDONED SEWER WITHIN THE SITE AND VERNON STREET WITH FLOWABLE FILL OR EXCAVATE AND DISPOSE OF OFFSITE OR COMBINATION.
3. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY SURVEY, PRIOR TO ANY CHANGES.
4. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS EXTEND TO OUTSIDE WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
5. SEWER: SEWER UTILITIES WITHIN CITY STREET RIGHT OF WAY TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. WASTE FROM KITCHEN OF PROPOSED JOE'S VARIETY STORE SHALL CONVEY WASTE TO A GREASE TRAP. M.E.P. TO PLACE VALVE FOR BACKFLOW PREVENTION INSIDE OF BUILDING FOR EACH SEWER CONNECTION. CONTACT ENGINEER IF FIELD CONDITIONS FROM INVERT VARY FROM DESIGN.
6. WATER UTILITIES: ALL 4" AND 8" WATER PIPE SHALL BE DUCTILE IRON PIPE UNLESS OTHERWISE APPROVED. FINAL PIPE SIZING TO BE PROVIDED BY MEP ENGINEER. INTERNAL METERING, BACKFLOW PREVENTION (PER PWD, A TESTABLE DOUBLE CHECK VALVE ASSEMBLY WILL BE REQUIRED AT THE BUILDING ENTRANCE), AND PRESSURE REDUCERS, IF REQUIRED, TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN THE DIAMETER OF THE WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS.
7. ELECTRIC, TELEPHONE, AND COMMUNICATIONS UTILITIES: DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION BY M.E.P. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. UGE/T/C AND UGE WITHIN CITY OF PORTLAND R.O.W. SHALL BE ENCASED IN CONCRETE. PULL BOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY FAIRPOINT AND TIME WARNER PRIOR TO CONSTRUCTION . CONTRACTOR TO COORDINATE.
8. GAS UTILITIES: PROJECT GAS LOAD AND INTERNAL GAS UTILITY DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. GAS METERS TO BE LOCATED BY M.E.P.
9. CONTRACTOR TO CONFIRM THAT THE FINAL MANHOLE ELEVATIONS MATCH THOSE SUPPLIED BY WOODARD & CURRAN'S PLANS BEFORE CONSTRUCTION

SEWER STRUCTURE SCHEDULE				
STRUCTURE	INTERIOR DIAMETER	RIM	INV. IN	INV. OUT
SMH-1	4'	109.7'	99.28'	99.18'
SMH-2	4'	111.87'	99.87'	99.86'



ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 4/22/15
PRICING	WHS 6/24/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
FINAL APPLICATION	WHS 10/13/15
REVISION	REV. / DATE

DRAWING NAME: UTILITY PLAN

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC. 158 DANFORTH STREET, PORTLAND MAINE 04102 (207) 775-2655

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 10-13-15 LICENSED PROFESSIONAL ENGINEER

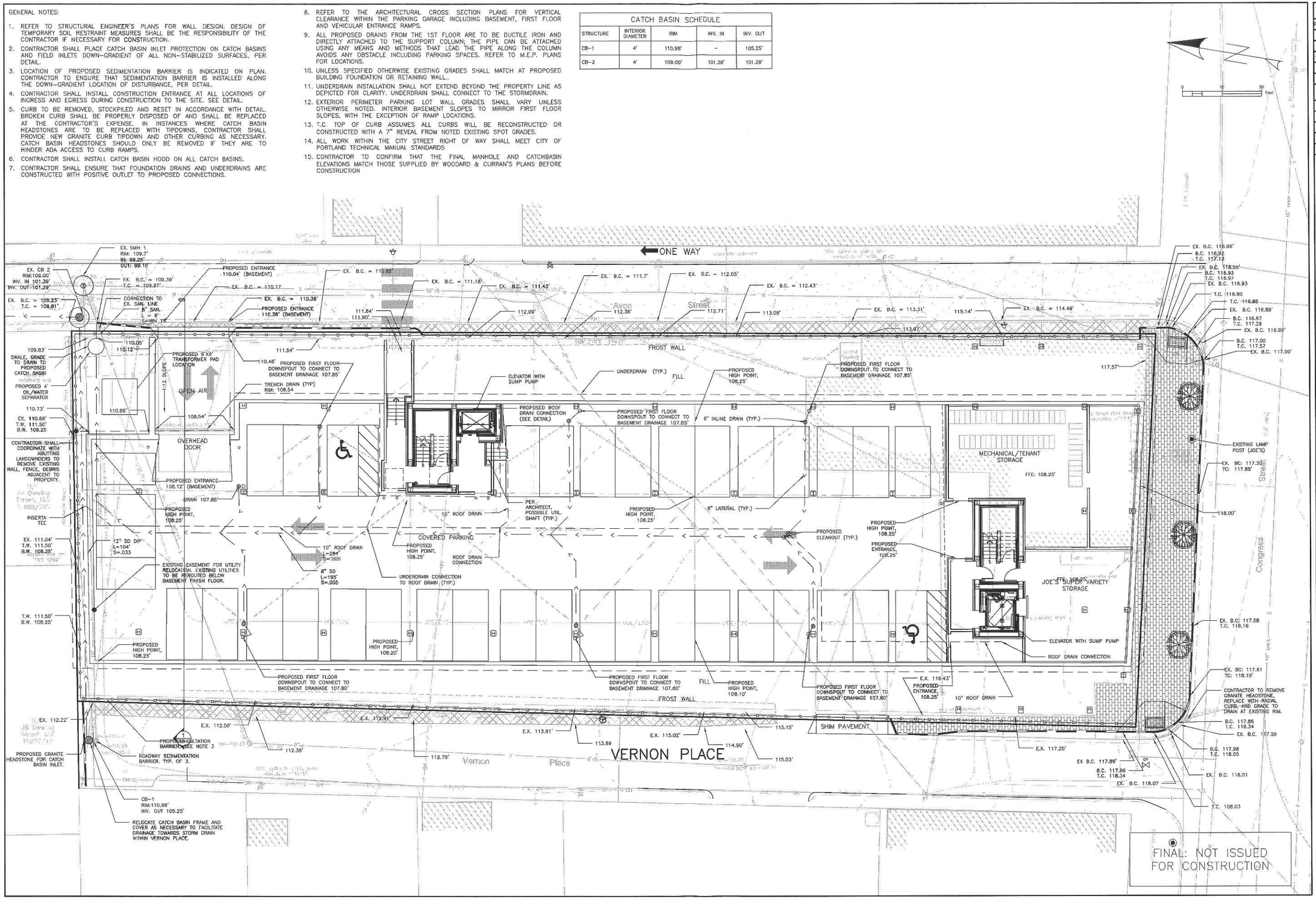
DRAWING NO.
C-20

GENERAL NOTES:

1. REFER TO STRUCTURAL ENGINEER'S PLANS FOR WALL DESIGN. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
2. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
3. LOCATION OF PROPOSED SEDIMENTATION BARRIER IS INDICATED ON PLAN. CONTRACTOR TO ENSURE THAT SEDIMENTATION BARRIER IS INSTALLED ALONG THE DOWN-GRADIENT LOCATION OF DISTURBANCE, PER DETAIL.
4. CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AT ALL LOCATIONS OF INGRESS AND EGRESS DURING CONSTRUCTION TO THE SITE. SEE DETAIL.
5. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. IN INSTANCES WHERE CATCH BASIN HEADSTONES ARE TO BE REPLACED WITH TIPDOWNS, CONTRACTOR SHALL PROVIDE NEW GRANITE CURB TIPDOWN AND OTHER CURBING AS NECESSARY. CATCH BASIN HEADSTONES SHOULD ONLY BE REMOVED IF THEY ARE TO HINDER ADA ACCESS TO CURB RAMPS.
6. CONTRACTOR SHALL INSTALL CATCH BASIN HOOD ON ALL CATCH BASINS.
7. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
8. REFER TO THE ARCHITECTURAL CROSS SECTION PLANS FOR VERTICAL CLEARANCE WITHIN THE PARKING GARAGE INCLUDING BASEMENT, FIRST FLOOR AND VEHICULAR ENTRANCE RAMPS.
9. ALL PROPOSED DRAINS FROM THE 1ST FLOOR ARE TO BE DUCTILE IRON AND DIRECTLY ATTACHED TO THE SUPPORT COLUMN; THE PIPE CAN BE ATTACHED USING ANY MEANS AND METHODS THAT LEAD THE PIPE ALONG THE COLUMN AVOIDS ANY OBSTACLE INCLUDING PARKING SPACES. REFER TO M.E.P. PLANS FOR LOCATIONS.
10. UNLESS SPECIFIED OTHERWISE EXISTING GRADES SHALL MATCH AT PROPOSED BUILDING FOUNDATION OR RETAINING WALL.
11. UNDERDRAIN INSTALLATION SHALL NOT EXTEND BEYOND THE PROPERTY LINE AS DEPICTED FOR CLARITY. UNDERDRAIN SHALL CONNECT TO THE STORMDRAIN.
12. EXTERIOR PERIMETER PARKING LOT WALL GRADES SHALL VARY UNLESS OTHERWISE NOTED. INTERIOR BASEMENT SLOPES TO MIRROR FIRST FLOOR SLOPES, WITH THE EXCEPTION OF RAMP LOCATIONS.
13. T.C. TOP OF CURB ASSUMES ALL CURBS WILL BE RECONSTRUCTED OR CONSTRUCTED WITH A 7" REVEAL FROM NOTED EXISTING SPOT GRADES.
14. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
15. CONTRACTOR TO CONFIRM THAT THE FINAL MANHOLE AND CATCHBASIN ELEVATIONS MATCH THOSE SUPPLIED BY WOODARD & CURRAN'S PLANS BEFORE CONSTRUCTION

CATCH BASIN SCHEDULE

STRUCTURE	INTERIOR DIAMETER	RIM	INV. IN	INV. OUT
CB-1	4'	110.98'	–	105.25'
CB-2	4'	109.00'	101.39'	101.29'



ISSUED FOR	BY DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
FINAL APPLICATION	WHS 10/13/15
REVISION	REV. DATE

DRAWING TITLE: GRADING & DRAINAGE PLAN: BASEMENT

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2635

FILE: 1060_CONGRESS
DATE: 4/6/2015
JN: 1060
SCALE: 1"=10'
DESIGNED BY: MAG
DRAWN BY: MAG
CHECKED BY: WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11419 — 10-13-15 — LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-30

GENERAL NOTES:

1. REFER TO STRUCTURAL ENGINEER'S PLANS FOR WALL DESIGN. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
2. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
3. LOCATION OF PROPOSED SEDIMENTATION BARRIER IS INDICATED ON PLAN. CONTRACTOR TO ENSURE THAT SEDIMENTATION BARRIER IS INSTALLED ALONG THE DOWN-GRADIENT LOCATION OF DISTURBANCE, PER DETAIL.
4. CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AT ALL LOCATIONS OF INGRESS AND EGRESS DURING CONSTRUCTION TO THE SITE. SEE DETAIL.
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8. REFER TO THE ARCHITECTURAL CROSS SECTION PLANS FOR VERTICAL CLEARANCE WITHIN THE PARKING GARAGE INCLUDING BASEMENT, FIRST FLOOR AND VEHICULAR ENTRANCE RAMPS.
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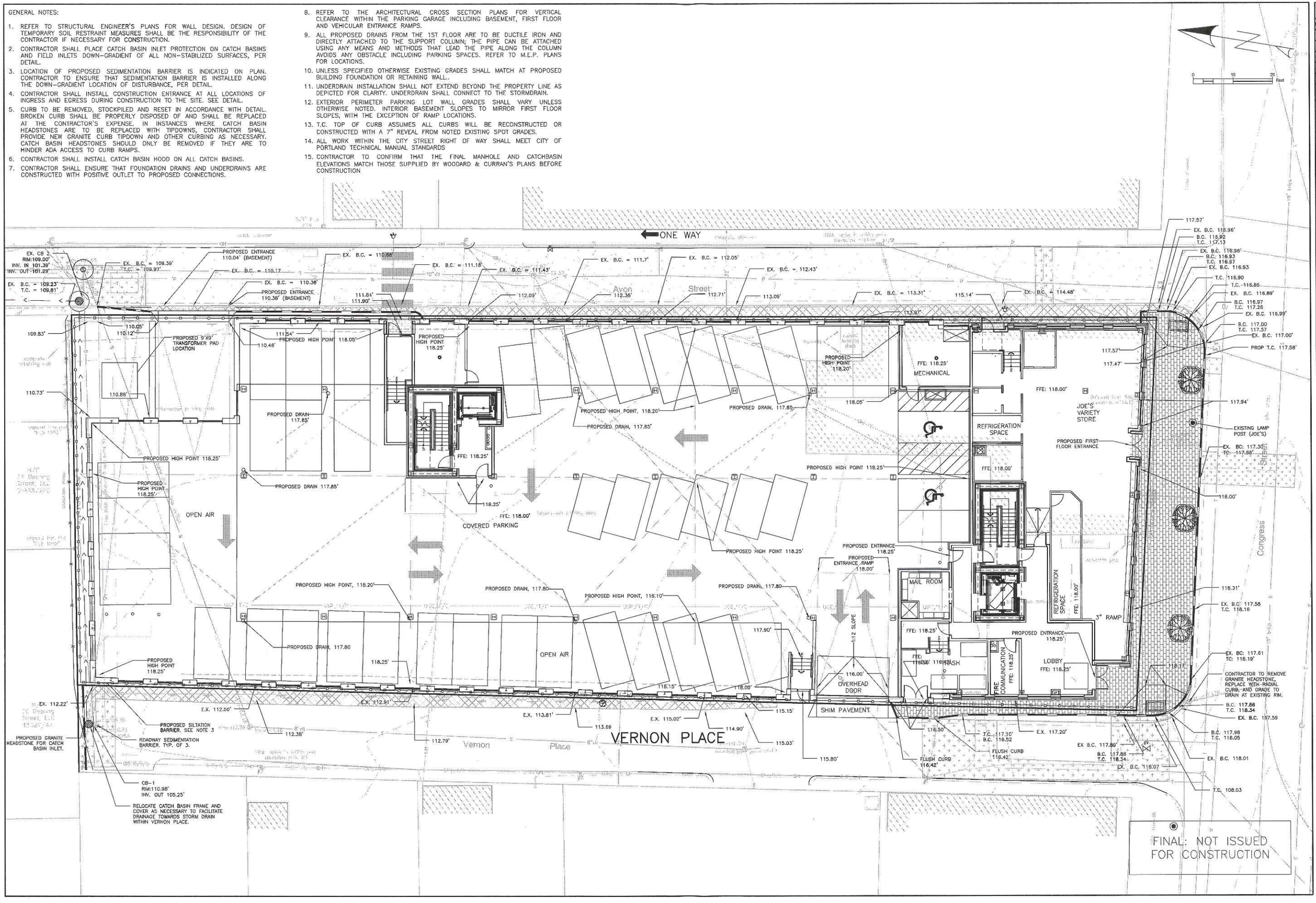
14. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS
15. CONTRACTOR TO CONFIRM THAT THE FINAL MANHOLE AND CATCHBASIN ELEVATIONS MATCH THOSE SUPPLIED BY WOODARD & CURRAN'S PLANS BEFORE CONSTRUCTION



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FINAL APPLICATION	WHS 10/13/15
REVISION	REV. DATE

DRAWING NAME: GRADING & DRAINAGE PLAN: FIRST FLOOR

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2635

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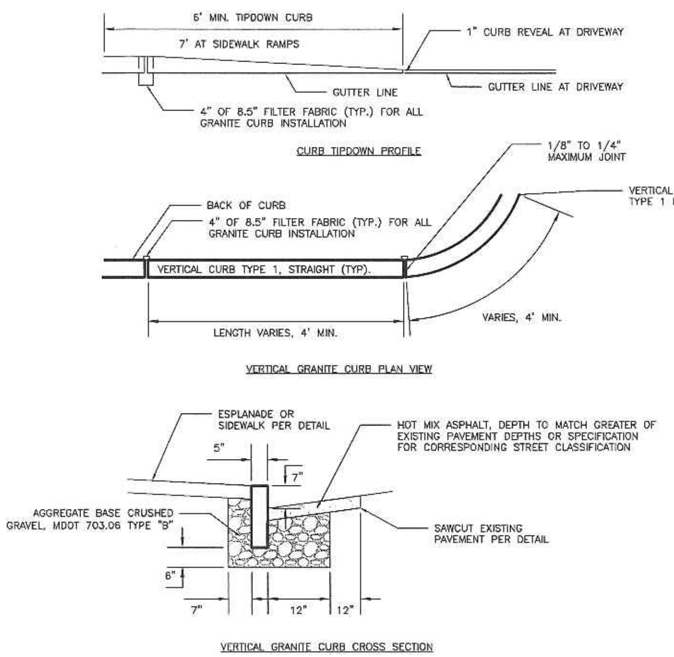
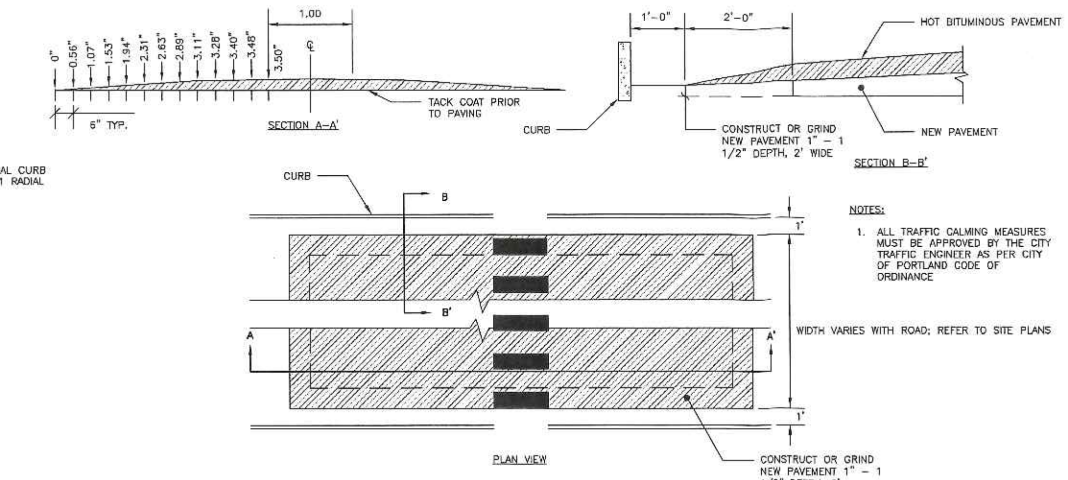
DESIGNED BY:	MAG
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
10-13-15
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-31



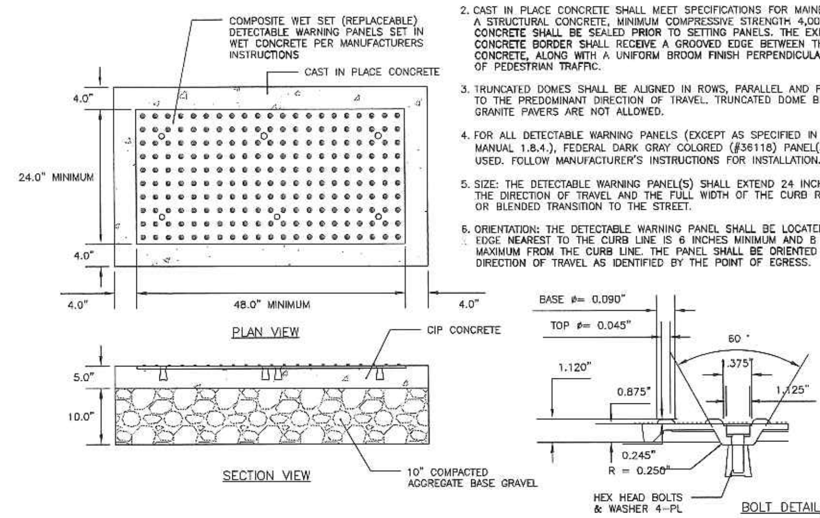
VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION
NOT TO SCALE



NOTES:

1. ALL TRAFFIC CALMING MEASURES MUST BE APPROVED BY THE CITY TRAFFIC ENGINEER AS PER CITY OF PORTLAND CODE OF ORDINANCE

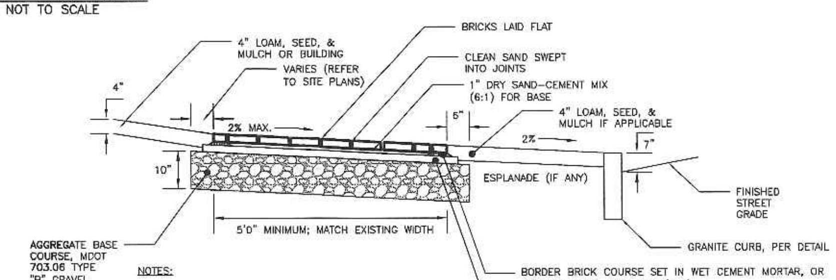
RAISED CROSSWALK
NOT TO SCALE



NOTES:

1. COMPOSITE WET SET (REPLACEABLE) DETECTABLE WARNING PANELS SHALL BE AS MANUFACTURED BY ADA SOLUTIONS, INC. (WWW.ADATILE.COM) OR APPROVED EQUAL.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE CONCRETE SHALL BE SEALED PRIOR TO SETTING PANELS. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE PANEL AND CONCRETE, ALONG WITH A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. FOR ALL DETECTABLE WARNING PANELS (EXCEPT AS SPECIFIED IN TECHNICAL MANUAL 1.8.4.), FEDERAL DARK GRAY COLORED (#36118) PANEL(S) SHALL BE USED. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
5. SIZE: THE DETECTABLE WARNING PANEL(S) SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
6. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST TO THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.

SIDEWALK RAMP DETECTABLE WARNING PANEL
NOT TO SCALE

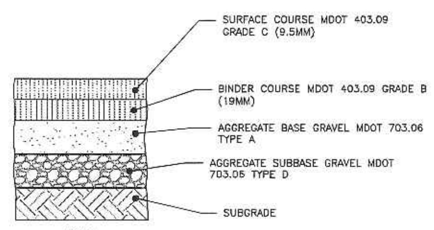


NOTES:

1. BRICKS TO BE USED:

   NEW CONSTRUCTION:
   4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.
2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.

BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL
NOT TO SCALE



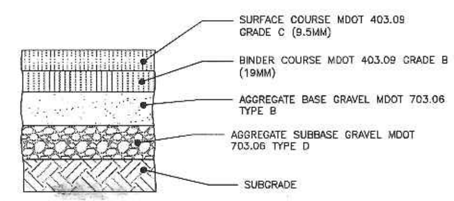
NOTES:

1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557.
2. ARTERIAL BITUMINOUS PAVEMENT PROFILE APPLIES ONLY WITHIN CONGRESS STREET R.O.W.

THICKNESS OF LAYERS

STANDARD	LAYERS
2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
3"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
6"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT PROFILE
NOT TO SCALE



NOTES:

1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557
2. LOCAL BITUMINOUS PAVEMENT PROFILE APPLIES TO LOCATIONS INCLUDED WITHIN AVON STREET AND VERNON PLACE R.O.W.

THICKNESS OF LAYERS

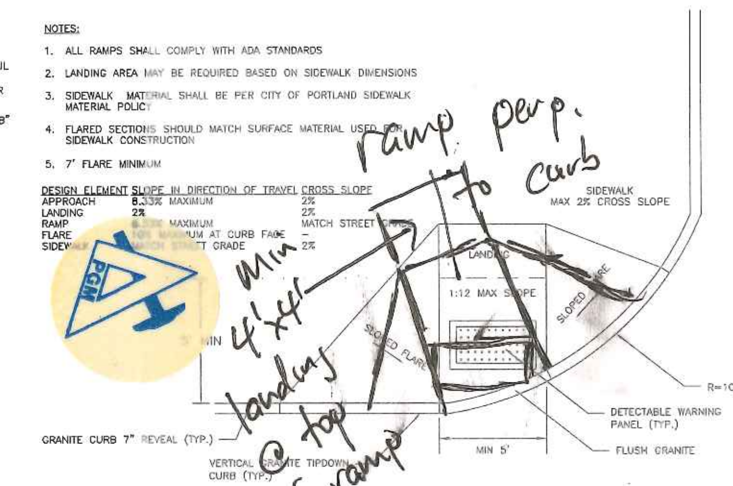
STANDARD	LAYERS
1–1/2"	SURFACE COURSE MDOT 403.09 GRADE C (9.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

LOCAL BITUMINOUS PAVEMENT PROFILE
NOT TO SCALE

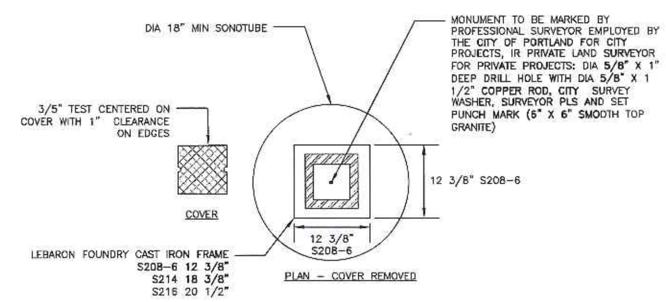
NOTES:

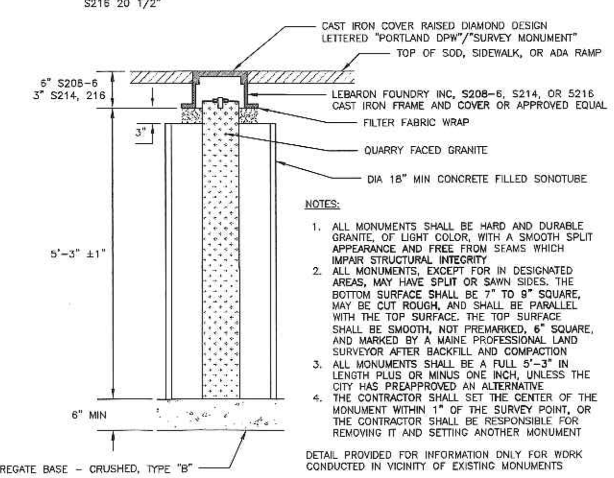
1. ALL RAMPS SHALL COMPLY WITH ADA STANDARDS
2. LANDING AREA MAY BE REQUIRED BASED ON SIDEWALK DIMENSIONS
3. SIDEWALK MATERIAL SHALL BE PER CITY OF PORTLAND SIDEWALK MATERIAL POLICY
4. FLARED SECTIONS SHOULD MATCH SURFACE MATERIAL USED FOR SIDEWALK CONSTRUCTION
5. 7' FLARE MINIMUM

DESIGN ELEMENT	SLOPE IN DIRECTION OF TRAVEL	CROSS SLOPE
APPROACH	8.33% MAXIMUM	2%
LANDING	2%	2%
RAMP	8.33% MAXIMUM	MATCH STREET
FLARE	10% MAXIMUM AT CURB FACE	–
SIDEWALK	MATCH STREET GRADE	2%



SIDEWALK RAMP
NOT TO SCALE





NOTES:

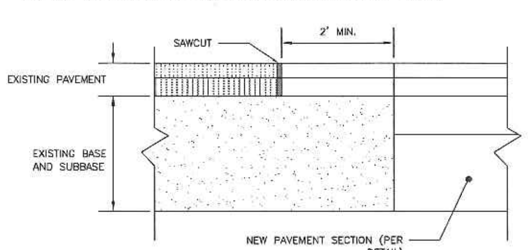
1. ALL MONUMENTS SHALL BE HARD AND DURABLE GRANITE, OF LIGHT COLOR, WITH A SMOOTH SPLIT APPEARANCE AND FREE FROM SEAMS WHICH IMPAIR STRUCTURAL INTEGRITY
2. ALL MONUMENTS, EXCEPT FOR IN DESIGNATED AREAS, MAY HAVE SPLIT OR SAWN SIDES. THE BOTTOM SURFACE SHALL BE 7" TO 8" SQUARE, MAY BE CUT ROUGH, AND SHALL BE PARALLEL WITH THE TOP SURFACE. THE TOP SURFACE SHALL BE SMOOTH, NOT PREMARKED, 6" SQUARE, AND MARKED BY A MAINE PROFESSIONAL LAND SURVEYOR AFTER BACKFILL AND COMPACTION
3. ALL MONUMENTS SHALL BE A FULL 5'–3" IN LENGTH PLUS OR MINUS ONE INCH, UNLESS THE CITY HAS PREAPPROVED AN ALTERNATIVE
4. THE CONTRACTOR SHALL SET THE CENTER OF THE MONUMENT WITHIN 1" OF THE SURVEY POINT, OR THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING IT AND SETTING ANOTHER MONUMENT

DETAIL PROVIDED FOR INFORMATION ONLY FOR WORK CONDUCTED IN VICINITY OF EXISTING MONUMENTS

GRANITE STREET MONUMENT
NOT TO SCALE

NOTES:

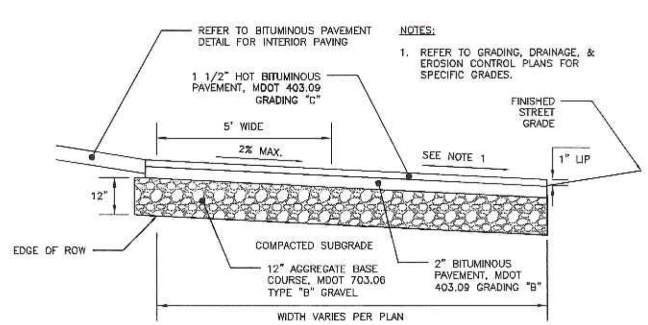
1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL
NOT TO SCALE

NOTES:

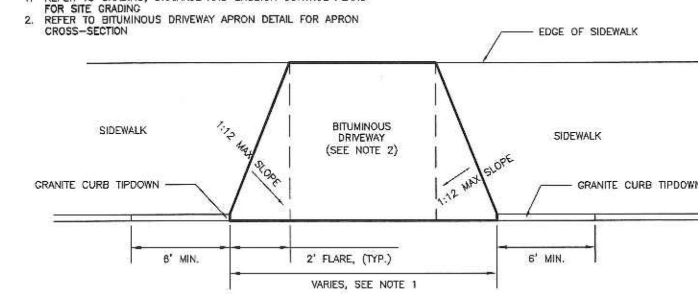
1. REFER TO GRADING, DRAINAGE, & EROSION CONTROL PLANS FOR SPECIFIC GRADES.



BITUMINOUS DRIVEWAY APRON DETAIL
NOT TO SCALE

NOTES:

1. REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLANS FOR SITE GRADING
2. REFER TO BITUMINOUS DRIVEWAY APRON DETAIL FOR APRON CROSS-SECTION



DRIVEWAY APRON LAYOUT DETAIL
NOT TO SCALE

FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
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COMMENT/RESPONSE	WHS 9/15/15
FINAL SUBMISSION	WHS 10/13/15

REVISION	REV. / DATE

SITE DETAILS 1

CONGRESS STREET REDEVELOPMENT

REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

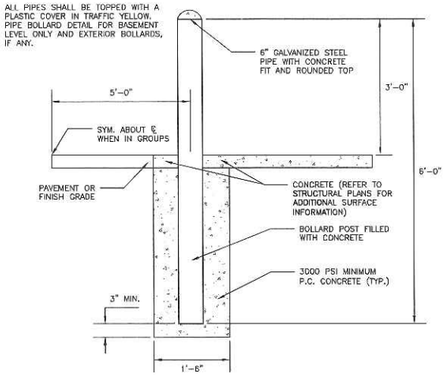
FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAC
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
10-13-15
PROFESSIONAL ENGINEER

DRAWING NO.
C-40

NOTES:

1. ALL PIPES SHALL BE TOPPED WITH A PLASTIC COVER IN TRAFFIC YELLOW.
2. PIPE BOLLARD DETAIL FOR BASEMENT LEVEL ONLY AND EXTERIOR BOLLARDS, IF ANY.

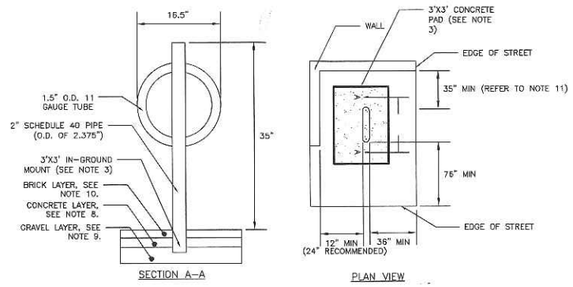


BASEMENT PIPE BOLLARD

NOT TO SCALE

NOTES:

1. BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.
2. BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION.
3. BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH AN IN-GROUND MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.
4. BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN, MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 36".
7. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
8. CONCRETE SHALL BE 4000 PSI @28 DAYS. BOTTOM OF CONCRETE SHALL BE AT TOP OF SIDEWALK GRAVEL ELEVATION. DEPTH VARIES APPROX. 4"-7".
9. GRAVEL LAYER SHALL BE INSTALLED IN ACCORDANCE WITH BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL, AND SHALL BE MAINEDOT 703.06 TYPE B.
10. TOP OF BRICK LAYER SHALL BE AT SAME ELEVATION IN ACCORDANCE WITH BRICK SIDEWALK DETAIL.
11. 54" MIN DISTANCE BETWEEN EDGE OF STREET AND BICYCLE HITCH IF AISLE IS REQUIRED.

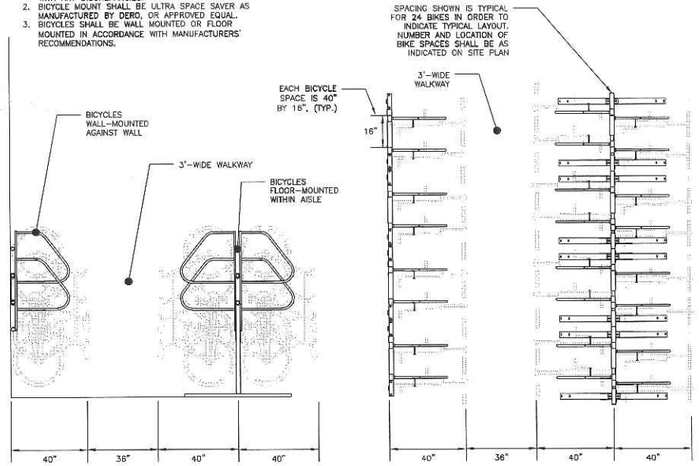


BICYCLE HITCH DETAIL

NOT TO SCALE

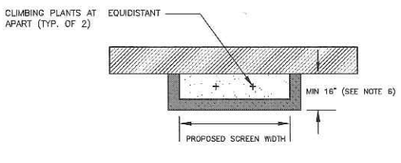
NOTES:

1. FINAL LOCATION OF INTERIOR BICYCLE RACKS SHALL CONFORM TO ALL ARCHITECTURAL DRAWINGS. CONTRACTOR TO NOTIFY ENGINEER AND ARCHITECT WITH ANY DISCREPANCIES.
2. BICYCLE MOUNT SHALL BE ULTRA SPACE SAVER AS MANUFACTURED BY DERO, OR APPROVED EQUAL.
3. BICYCLES SHALL BE WALL MOUNTED OR FLOOR MOUNTED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.



INTERIOR BICYCLE SPACE LAYOUT

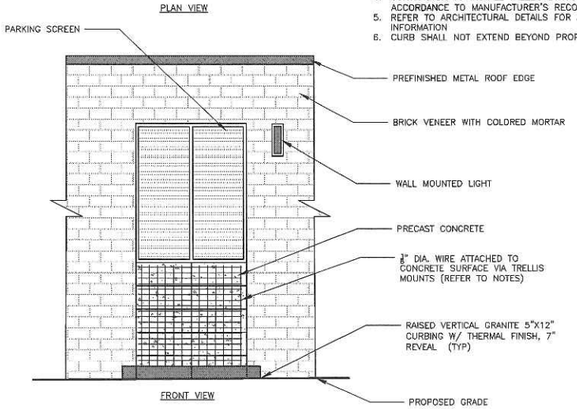
NOT TO SCALE



PLAN VIEW

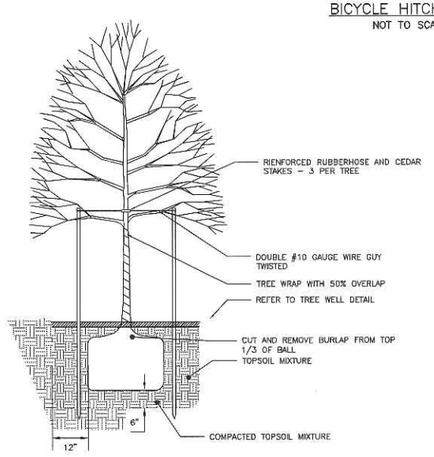
NOTES:

1. WIRE CABLES ARE TO BE ATTACHED PERPENDICULAR TO EACH OTHER FORMING A GRID PATTERN; DUAL-LOCKING TRELLIS CROSS CLAMPS OR AN APPROVED ALTERNATIVE SHALL BE USED AT EACH INTERSECTION
2. FINAL LOCATION OF TRELLIS MOUNTS WILL BE DEFINED BY THE CONTRACTOR AND APPROVED BY THE ARCHITECT
3. ALL TRELLIS COMPONENTS TO BE MADE OF SAE 316 STAINLESS STEEL AND MANUFACTURED BY HAYN LINES OR AN APPROVED EQUAL
4. CONTRACTOR TO INSTALL TRELLIS STRUCTURE IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATIONS
5. REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION
6. CURB SHALL NOT EXTEND BEYOND PROPERTY LINE.



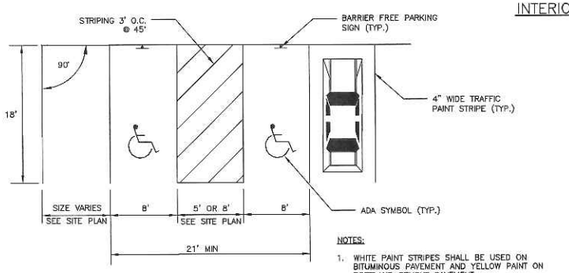
STAINLESS STEEL GREEN WALL TRELLIS SYSTEM

NOT TO SCALE



TREE PLANTING DETAIL

NOT TO SCALE

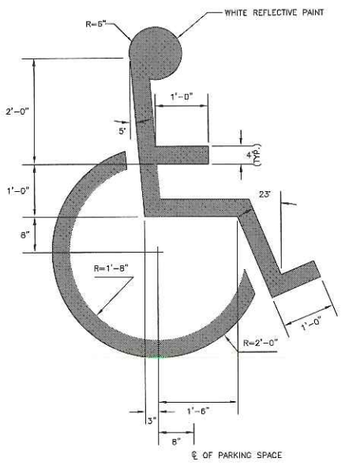


PARKING SPACE DIMENSIONS

NOT TO SCALE

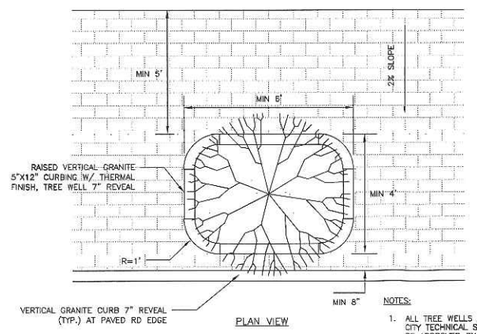
NOTES:

1. WHITE PAINT STRIPES SHALL BE USED ON BITUMINOUS PAVEMENT AND YELLOW PAINT ON PORTLAND CEMENT PAVEMENT.
2. STRIPING FOR ANY NON-BARRIER FREE PARKING SPACE WITH A WIDTH LESS THAN 18" SHALL BE PAINTED BLUE.



INTERNATIONAL BARRIER FREE SYMBOL

NOT TO SCALE



NOTES:

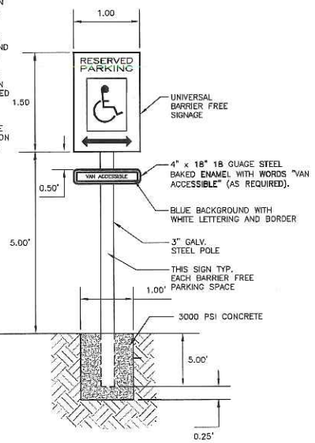
1. ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST
2. GRANITE CURB TREE WELL SHALL BE SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY

TREEWELL IN BRICK SIDEWALK

NOT TO SCALE

NOTES:

1. ALL ASPECTS OF RESERVED PARKING SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION
2. SIGN SHALL BE CONSTRUCTED AS SIGN R7-8 UNDER THE "PARKING AND STANDING SIGNS AND PLAQUES" (R7 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION. VAN ACCESSIBILITY SHALL BE CONSTRUCTED AS SIGN R7-8a OR R7-8b.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



BARRIER FREE PARKING SIGN

NOT TO SCALE

FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
FINAL SUBMISSION	WHS 9/15/15
REVISION	REV. DATE

DRAWING NAME: SITE DETAILS 2

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

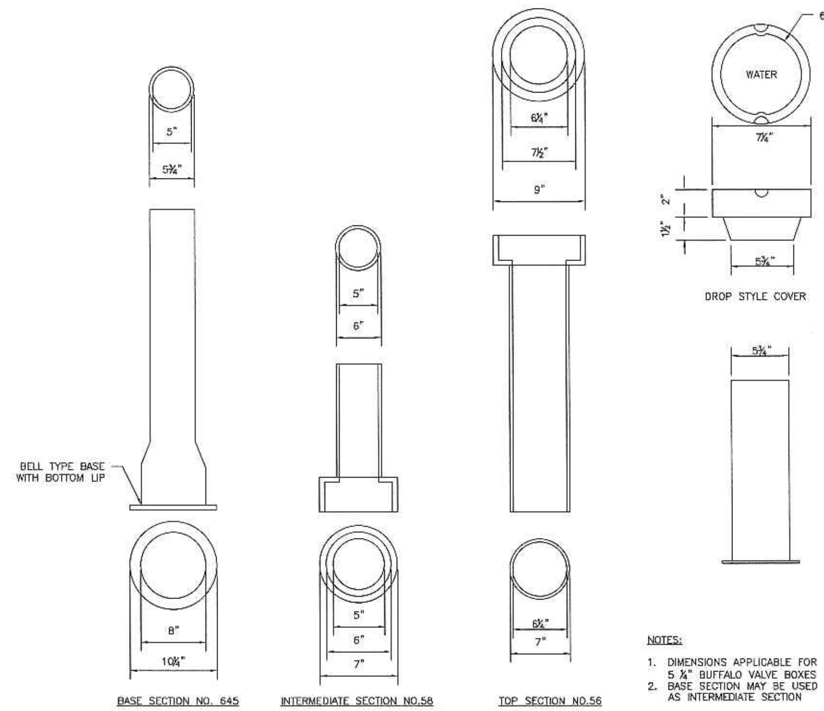
CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8815 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_DETAILS
DATE:	4/20/2015
J/N:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11416 REGISTERED PROFESSIONAL ENGINEER

DRAWING NO. C-41



NOTES:

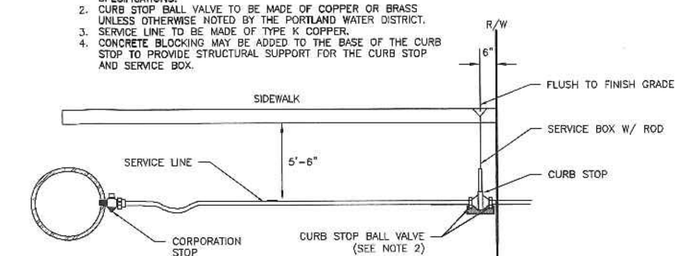
1. DIMENSIONS APPLICABLE FOR 5 ¼" BUFFALO VALVE BOXES
2. BASE SECTION MAY BE USED AS INTERMEDIATE SECTION

VALVE BOX & COVER

NOT TO SCALE

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE CITY OF PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING MAY BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.

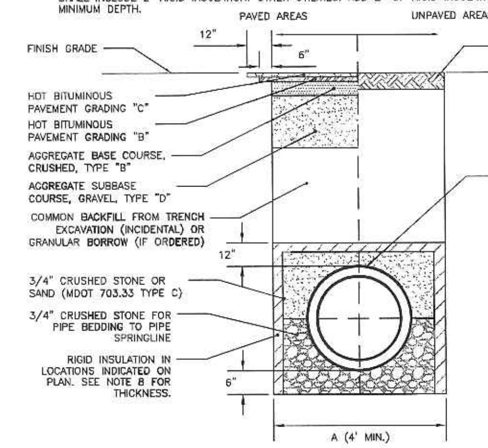


TYPICAL SERVICE CONNECTION

NOT TO SCALE

NOTES:

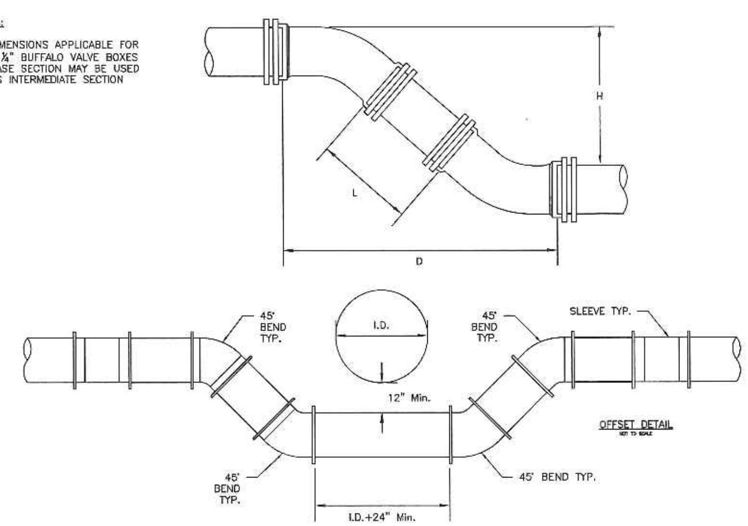
1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II-2.
3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF.SD) SHALL BE ORIENTED UP.
5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND ROW.STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.



TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	5
15	5
18	5
24	6
36	6
48	7

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE



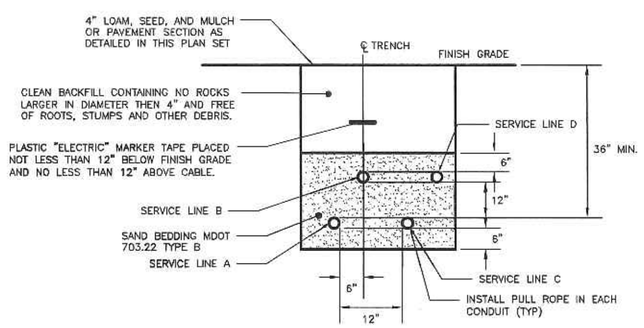
	6" PIPE		8" PIPE		12" PIPE	
H	D	L	D	L	D	L
12"	1' 6-1/2"	0' 10-1/2"	1' 7-1/2"	0' 9-1/2"	1' 11-1/2"	0' 5-1/2"
13"	1' 7-1/2"	0' 11-7/8"	1' 8-1/2"	0' 10-7/8"	2' 0-1/2"	0' 6-7/8"
14"	1' 8-1/2"	1' 1-5/16"	1' 9-1/2"	1' 0-5/16"	2' 1-1/2"	0' 8-5/16"
15"	1' 9-1/2"	1' 2-11/16"	1' 10-1/2"	1' 1-11/16"	2' 2-1/2"	0' 9-11/16"
16"	1' 10-1/2"	1' 4-1/8"	1' 11-1/2"	1' 3-1/8"	2' 3-1/2"	0' 11-1/8"
17"	1' 11-1/2"	1' 5-9/16"	2' 0-1/2"	1' 4-9/16"	2' 4-1/2"	1' 0-9/16"
18"	2' 0-1/2"	1' 6-15/16"	2' 1-1/2"	1' 5-15/16"	2' 5-1/2"	1' 1-15/16"
19"	2' 1-1/2"	1' 8-3/8"	2' 2-1/2"	1' 7-3/8"	2' 6-1/2"	1' 3-3/8"
20"	2' 2-1/2"	1' 9-13/16"	2' 3-1/2"	1' 8-13/16"	2' 7-1/2"	1' 4-13/16"
21"	2' 3-1/2"	1' 11-3/16"	2' 4-1/2"	1' 10-3/16"	2' 8-1/2"	1' 6-3/16"
22"	2' 4-1/2"	2' 0-5/8"	2' 5-1/2"	1' 11-5/8"	2' 9-1/2"	1' 7-5/8"
23"	2' 5-1/2"	2' 2"	2' 6-1/2"	2' 1"	2' 10-1/2"	1' 9"
24"	2' 6-1/2"	2' 3-7/16"	2' 7-1/2"	2' 2-7/16"	2' 11-1/2"	1' 10-7/16"
25"	2' 7-1/2"	2' 4-7/8"	2' 8-1/2"	2' 3-7/8"	3' 0-1/2"	1' 11-7/8"
26"	2' 8-1/2"	2' 6-1/4"	2' 9-1/2"	2' 5-1/4"	3' 1-1/2"	2' 1-1/4"
27"	2' 9-1/2"	2' 7-11/16"	2' 10-1/2"	2' 6-11/16"	3' 2-1/2"	2' 2-11/16"
28"	2' 10-1/2"	2' 9-1/8"	2' 11-1/2"	2' 8-1/8"	3' 3-1/2"	2' 4-1/8"
29"	2' 11-1/2"	2' 10-1/2"	3' 0-1/2"	2' 9-1/2"	3' 4-1/2"	2' 5-1/2"
30"	3' 0-1/2"	2' 11-15/16"	3' 1-1/2"	2' 10-15/16"	3' 5-1/2"	2' 6-15/16"
31"	3' 1-1/2"	3' 1-5/16"	3' 2-1/2"	3' 0-5/16"	3' 6-1/2"	2' 8-5/16"
32"	3' 2-1/2"	3' 2-3/4"	3' 3-1/2"	3' 1-3/4"	3' 7-1/2"	2' 9-3/4"
33"	3' 3-1/2"	3' 4-3/16"	3' 4-1/2"	3' 3-3/16"	3' 8-1/2"	2' 11-3/16"
34"	3' 4-1/2"	3' 5-9/16"	3' 5-1/2"	3' 4-9/16"	3' 9-1/2"	3' 0-9/16"
35"	3' 5-1/2"	3' 7"	3' 6-1/2"	3' 6"	3' 10-1/2"	3' 2"
36"	3' 6-1/2"	3' 8-7/16"	3' 7-1/2"	3' 7-7/16"	3' 11-1/2"	3' 3-7/16"
37"	3' 7-1/2"	3' 9-13/16"	3' 8-1/2"	3' 8-13/16"	4' 0-1/2"	3' 4-13/16"
38"	3' 8-1/2"	3' 11-1/4"	3' 9-1/2"	3' 10-1/4"	4' 1-1/2"	3' 6-1/4"
39"	3' 9-1/2"	4' 0-11/16"	3' 10-1/2"	3' 11-11/16"	4' 2-1/2"	3' 7-11/16"
40"	3' 10-1/2"	4' 2-1/16"	3' 11-1/2"	4' 1-1/16"	4' 3-1/2"	3' 9-1/16"
41"	3' 11-1/2"	4' 3-1/2"	4' 0-1/2"	4' 2-1/2"	4' 4-1/2"	3' 10-1/2"
42"	4' 0-1/2"	4' 4-7/8"	4' 1-1/2"	4' 3-7/8"	4' 5-1/2"	3' 11-7/8"
43"	4' 1-1/2"	4' 6-5/16"	4' 2-1/2"	4' 5-5/16"	4' 6-1/2"	4' 1-5/16"
44"	4' 2-1/2"	4' 7-3/4"	4' 3-1/2"	4' 6-3/4"	4' 7-1/2"	4' 2-3/4"
45"	4' 3-1/2"	4' 9-1/8"	4' 4-1/2"	4' 8-1/8"	4' 8-1/2"	4' 4-1/8"
46"	4' 4-1/2"	4' 10-9/16"	4' 5-1/2"	4' 9-9/16"	4' 9-1/2"	4' 5-9/16"
47"	4' 5-1/2"	4' 11-15/16"	4' 6-1/2"	4' 10-15/16"	4' 10-1/2"	4' 6-15/16"
48"	4' 6-1/2"	5' 1-3/8"	4' 7-1/2"	5' 0-3/8"	4' 11-1/2"	4' 8-3/8"
49"	4' 7-1/2"	5' 2-13/16"	4' 8-1/2"	5' 1-13/16"	5' 0-1/2"	4' 9-13/16"
50"	4' 8-1/2"	5' 4-3/16"	4' 9-1/2"	5' 3-3/16"	5' 1-1/2"	4' 11-3/16"
51"	4' 9-1/2"	5' 5-5/8"	4' 10-1/2"	5' 4-5/8"	5' 2-1/2"	5' 0-5/8"
52"	4' 10-1/2"	5' 7-1/16"	4' 11-1/2"	5' 6-1/16"	5' 3-1/2"	5' 2-1/16"
53"	4' 11-1/2"	5' 8-7/16"	5' 0-1/2"	5' 7-7/16"	5' 4-1/2"	5' 3-7/16"
54"	5' 0-1/2"	5' 9-7/8"	5' 1-1/2"	5' 8-7/8"	5' 5-1/2"	5' 4-7/8"
55"	5' 1-1/2"	5' 11-5/16"	5' 2-1/2"	5' 10-5/16"	5' 6-1/2"	5' 5-5/16"

NOTES:

1. DIMENSIONS APPLICABLE FOR SIGMA COMPACT BENDS. FOR TYLER COMPACT BENDS, ADD 1/2" TO "D" DIMENSION AND SUBTRACT 1/2" FROM "L" DIMENSION.
2. FOR OTHER FITTINGS REFER TO MANUFACTURER'S RECOMMENDATIONS.

TYPICAL MAIN OFFSET

NOT TO SCALE



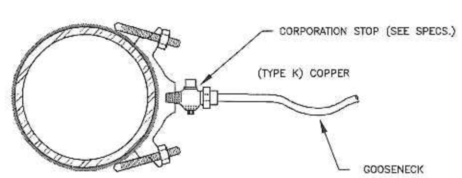
CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2-5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2-4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2-4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2-4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

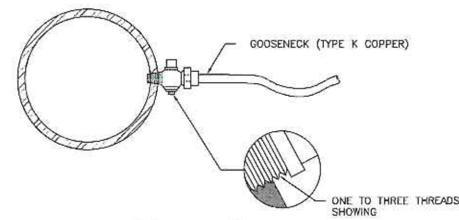
UTILITY TRENCH:
PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE



SERVICE SADDLE: 1-1/2" AND 2" C.C. THREAD)

NOT TO SCALE

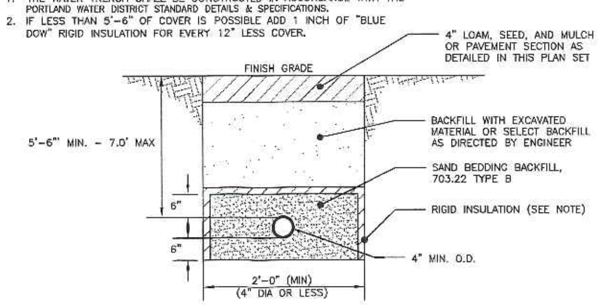


SERVICE TAP: 3/4" AND 1" C.C. THREAD

NOT TO SCALE

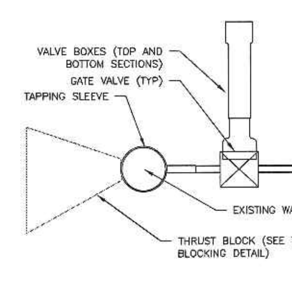
NOTES:

1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'-6" OF COVER IS POSSIBLE ADD 1 INCH OF "BLUE DOW" RIGID INSULATION FOR EVERY 12" LESS COVER.



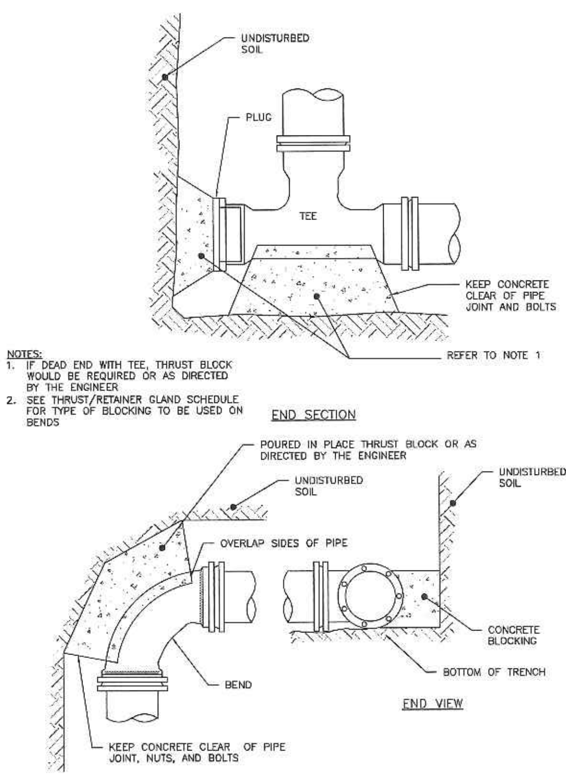
WATER SERVICE TRENCH SECTION DETAIL

NOT TO SCALE



TAPPING SLEEVE AND VALVE

NOT TO SCALE



NOTES:

1. IF DEAD END WITH TEE, THRUST BLOCK WOULD BE REQUIRED OR AS DIRECTED BY THE ENGINEER
2. SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

THRUST BLOCKING: REGULAR BEND

NOT TO SCALE

FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
FINAL SUBMISSION	WHS 10/13/15
REVISION	REV. / DATE

DRAWING NAME: UTILITY DETAILS

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_DETAILS
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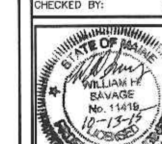
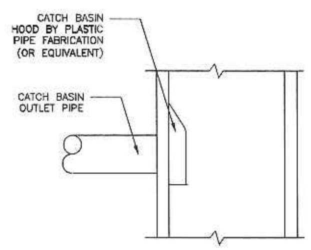


DRAWING NO.

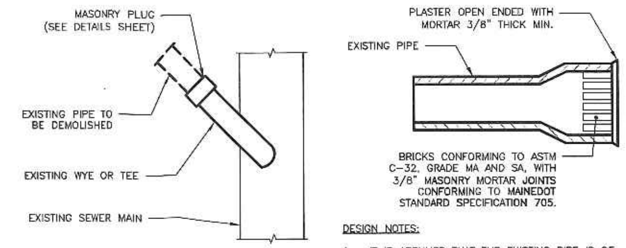
C-42



NOTES:

1. INSTALL CATCH BASIN HOODS IN ALL CATCH BASINS UNLESS OTHER WISE NOTED
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS

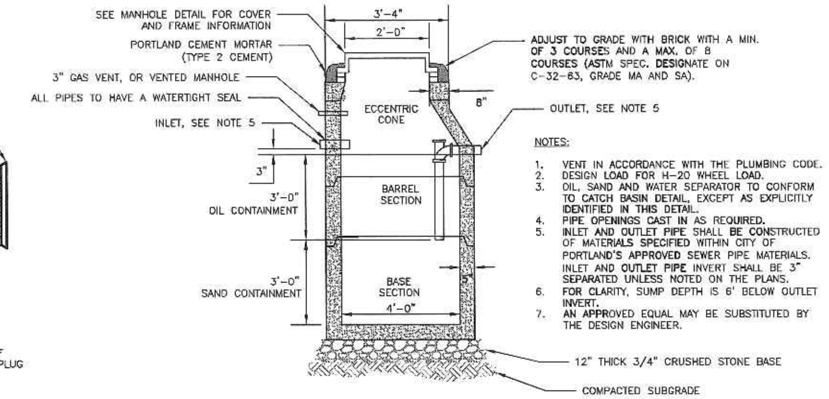
CATCH BASIN HOOD DETAIL
NOT TO SCALE



DESIGN NOTES:

1. IT IS ASSUMED THAT THE EXISTING PIPE IS OF VITRIFIED CLAY CONSTRUCTION. USE CAP OR PLUG FOR PVC PIPE

MASONRY PLUG DETAIL
NOT TO SCALE



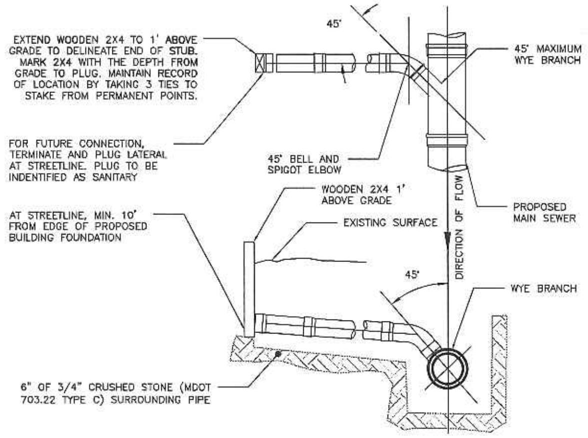
NOTES:

1. VENT IN ACCORDANCE WITH THE PLUMBING CODE.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. OIL, SAND AND WATER SEPARATOR TO CONFORM TO CATCH BASIN DETAIL, EXCEPT AS EXPLICITLY IDENTIFIED IN THIS DETAIL.
4. PIPE OPENINGS CAST IN AS REQUIRED.
5. INLET AND OUTLET PIPE SHALL BE CONSTRUCTED OF MATERIALS SPECIFIED WITHIN CITY OF PORTLAND'S APPROVED SEWER PIPE MATERIALS. INLET AND OUTLET PIPE INVERT SHALL BE 3" SEPARATED UNLESS NOTED ON THE PLANS.
6. FOR CLARITY, SUMP DEPTH IS 6' BELOW OUTLET INVERT.
7. AN APPROVED EQUAL MAY BE SUBSTITUTED BY THE DESIGN ENGINEER.

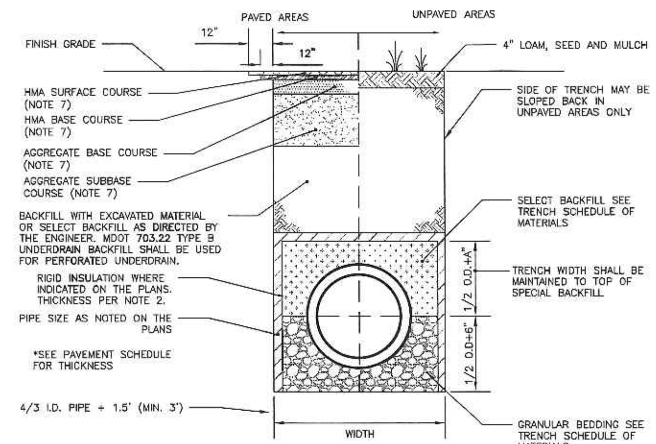
4'-0" DIAMETER PRECAST OIL AND WATER SEPARATOR
NOT TO SCALE

NOTES:

1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3. CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL
NOT TO SCALE



ALLOWABLE PIPE MATERIALS:

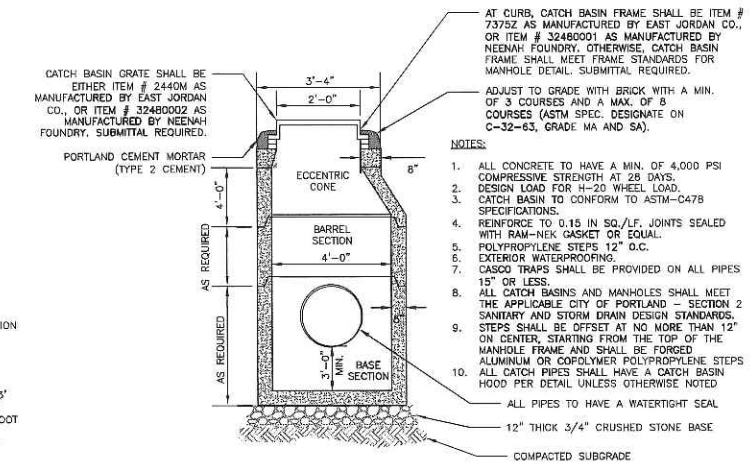
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N-12 HP TRIPLE-WALL MIN PS-46 RATING
- ADS SANITITE HP MIN. PS-46

SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   - 4.1. 2'-0" - STORM DRAIN
   - 4.2. 5'-0" - SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS

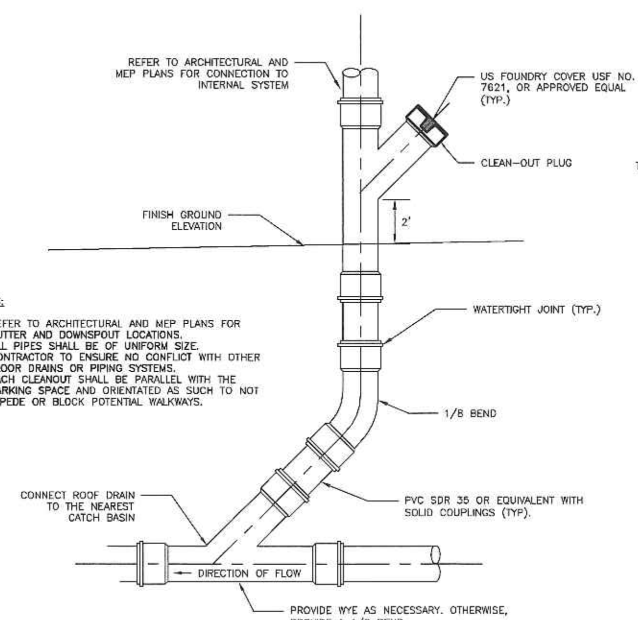
STORM DRAIN AND SEWER TYPICAL TRENCH SECTION
NOT TO SCALE



NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND - SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
9. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS
10. ALL CATCH PIPES SHALL HAVE A CATCH BASIN HOOD PER DETAIL UNLESS OTHERWISE NOTED

4'-0" DIAMETER PRECAST CATCH BASIN
NOT TO SCALE



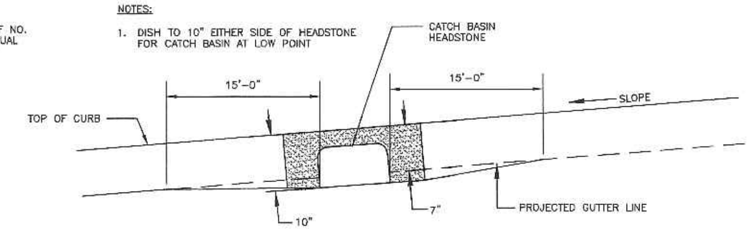
NOTES:

1. REFER TO ARCHITECTURAL AND MEP PLANS FOR GUTTER AND DOWNSPOUT LOCATIONS.
2. ALL PIPES SHALL BE OF UNIFORM SIZE.
3. CONTRACTOR TO ENSURE NO CONFLICT WITH OTHER FLOOR DRAINS OR PIPING SYSTEMS.
4. EACH CLEANOUT SHALL BE PARALLEL WITH THE PARKING SPACE AND ORIENTATED AS SUCH TO NOT IMPEDE OR BLOCK POTENTIAL WALKWAYS.

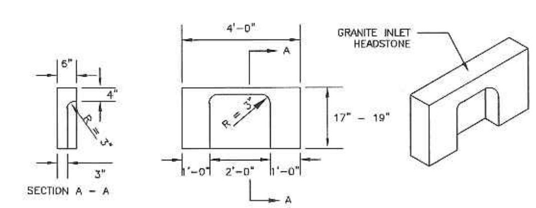
ROOF DRAIN WITH CLEANOUT DETAIL
NOT TO SCALE

NOTES:

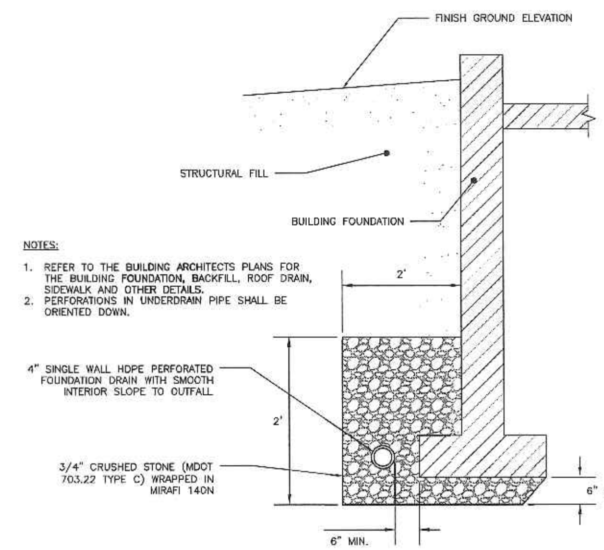
1. DISH TO 10" EITHER SIDE OF HEADSTONE FOR CATCH BASIN AT LOW POINT



PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET
NOT TO SCALE



4' GRANITE HEADSTONE FOR CATCH BASIN INLET
NOT TO SCALE



NOTES:

1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.

FOUNDATION DRAIN DETAIL
NOT TO SCALE

FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
FINAL SUBMISSION	WHS 10/13/15
REVISION	REV. / DATE

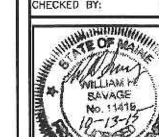
DRAWING NAME: DRAINAGE DETAILS 1

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

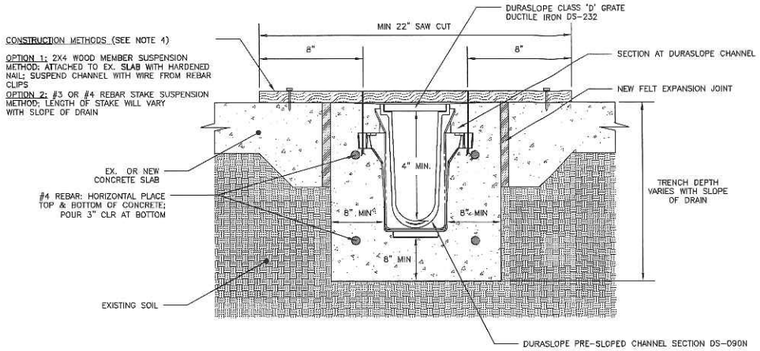
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAG
CHECKED BY:	WHS

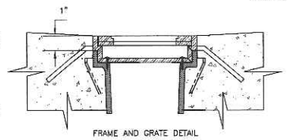


DRAWING NO.
C-43



NOTES:

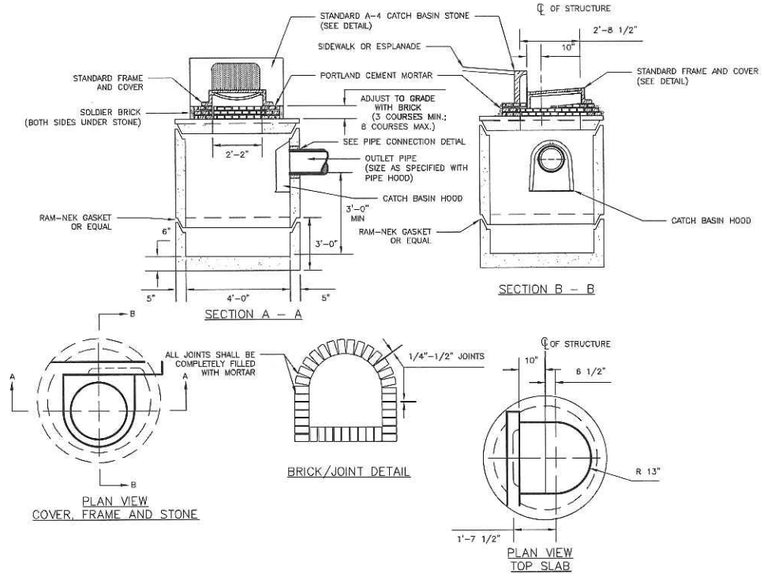
1. CHANNELS TO BE INSTALLED WITH A BLANK GRATE; GRATE TO BE PROTECTED FROM CONCRETE POUR (COVER HOLES WITH TAPE)
2. SET DRAIN IN CHANNEL SURROUNDED BY 8" OF CONCRETE OR THICKNESS OF THE CONCRETE SLAB WITH A MIN. OF 3500 PSI
3. AVOID FULL LOAD TRAFFIC FOR 28 DAYS OR UNTIL CONCRETE HAS COMPLETELY HARDENED
4. REFER TO MANUFACTURER'S INSTRUCTIONS FOR COMPLETE INSTALLATION DETAILS



FRAME AND GRATE DETAIL

DURASLOPE CLASS D TRENCH DRAIN INSTALLATION

NOT TO SCALE

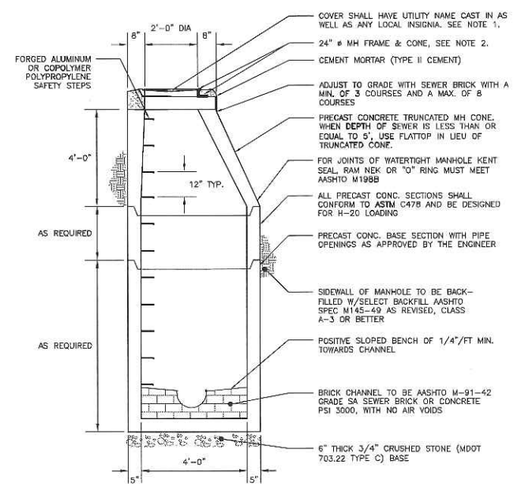


CITY OF PORTLAND PRECAST CONCRETE CATCH BASIN

NOT TO SCALE

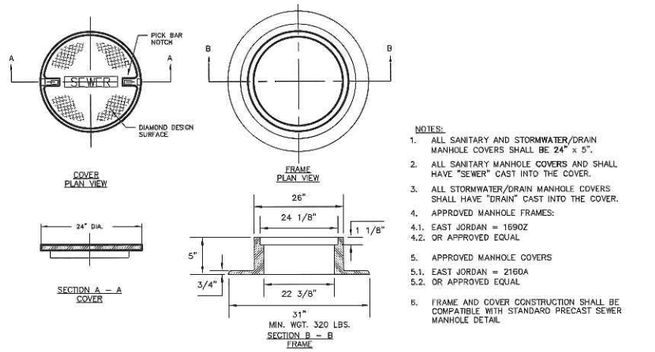
NOTES:

1. MANHOLE COVER FOR SEWER MANHOLE SHALL BE ENGRAVED "SEWER", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960002 AS MANUFACTURED BY NEENAH FOUNDRY. MANHOLE COVER FOR STORM SEWER SHALL BE ENGRAVED "DRAIN", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960003 AS MANUFACTURED BY NEENAH FOUNDRY.
2. MANHOLE FRAME SHALL BE EITHER ITEM # 14960001, AS MANUFACTURED BY NEENAH FOUNDRY, OR ITEM # 1960Z, AS MANUFACTURED BY EAST JORDAN CO.
3. WITHIN CITY OF PORTLAND ROW, STORM DRAIN MANHOLE SHALL CONFORM WITH "STANDARD PRECAST SEWER MANHOLE DETAIL", WITH THE EXCEPTION THAT THE COVER SHALL BE MARKED AS "DRAIN". REFER TO CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 – SANITARY SEWER AND STORM DRAIN, FIGURE II-1
4. SUBMITTAL REQUIRED FOR MANHOLES, MANHOLE FRAMES & MANHOLE COVERS



STANDARD PRECAST SEWER MANHOLE

NOT TO SCALE



NOTES:

1. ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".
2. ALL SANITARY MANHOLE COVERS AND SHALL HAVE "SEWER" CAST INTO THE COVER.
3. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
4. APPROVED MANHOLE FRAMES:
   4.1. EAST JORDAN = 1690Z
   4.2. OR APPROVED EQUAL
5. APPROVED MANHOLE COVERS
   5.1. EAST JORDAN = 2160A
   5.2. OR APPROVED EQUAL
6. FRAME AND COVER CONSTRUCTION SHALL BE COMPATIBLE WITH STANDARD PRECAST SEWER MANHOLE DETAIL

CAST IRON MANHOLE COVER AND FRAME

NOT TO SCALE

FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
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DRAWING NAME: DRAINAGE DETAILS 2

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8818 PORTLAND, ME 04104

ACORN ENGINEERING, INC.
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DRAWN BY:	MAC
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11418 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-44

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 VERNON PLACE, AVON STREET, AND CONGRESS STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.1 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.

- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% F THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.

- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL RETAINING AND FOUNDATION WALLS TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN AVON.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

TEMPORARY SEEDING PLAN

SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P205–K20) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

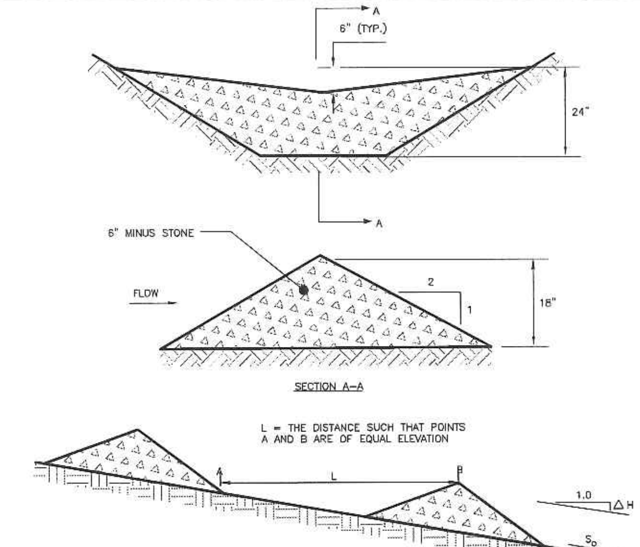
MULCHING

MULCH SHALL BE APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT.

CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

FINAL: NOT ISSUED FOR CONSTRUCTION



SPACING BETWEEN CHECK DAMS

S_o (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAM

NOT TO SCALE

NOTES:

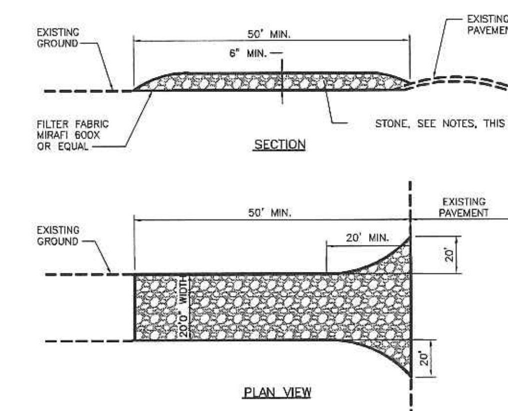
1) CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

2) STONE SHALL BE 2"–3" COARSE AGGREGATE

3) CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.

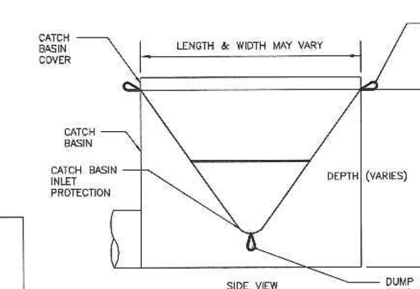
4) WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.

5) CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY



STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:

1) CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

2) CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.

3) SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION

NOT TO SCALE

ISSUED FOR	BY / DATE
PRELIM. APPLICATION	WHS 7/30/15
PC DD SET	WHS 8/7/15
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
FINAL SUBMISSION	WHS 10/13/15
REVISION	REV. / DATE

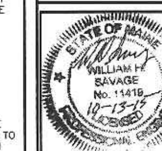
DRAWING NAME: EROSION & SEDIMENT CONTROL DETAILS

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, ME 04104

A C O R N ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775–2655

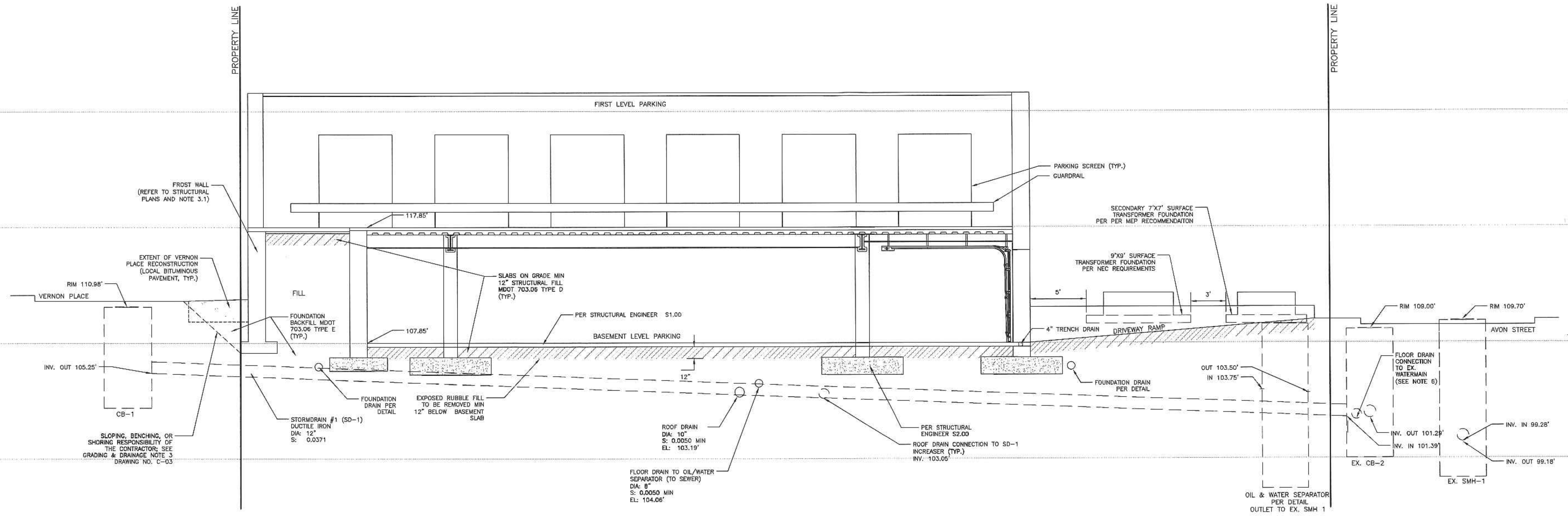
FILE:	1060_DETAILS
DATE:	4/20/2015
JN:	1060
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	MAC
CHECKED BY:	WHS



DRAWING NO.
C-45

NOTES:

1. CROSS SECTION FROM RSA A3-5; REFER TO RSA DRAWING FOR ADDITIONAL BUILDING DETAILS
2. ARCHITECTURAL AND STRUCTURAL CROSS-SECTIONS ARE SUBJECT TO CHANGE. CONTRACTOR TO COORDINATE VARIOUS PROFESSIONAL DRAWINGS AND NOTIFY ACORN ENGINEERING ANY CONFLICTS OR DISCREPANCIES.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. DURING THE PRE-CONSTRUCTION PHASE THE CONTRACTOR SHALL NOTIFY THE OWNER SHOULD THEIR MEANS AND METHODS REQUIRE AND EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. GEOTECHNICAL REPORT BY SUMMIT GEOENGINEERING SERVICES DATED MAY 2015 REQUIREMENTS INCLUDE BUT ARE NOT LIMITED TO:
   - 4.1. ALL FROST WALLS SHALL EXTEND MIN 4' BELOW FINAL BASEMENT FLOOR GRADE UNLESS BEDROCK IS DETECTED THEN MIN 2' IS ACCEPTABLE; ACTUAL DEPTH TO BE DETERMINED BY STRUCTURAL ENGINEER
   - 4.2. EXPOSED, LOAD-BEARING NATIVE SOIL IS TO BE PROOFROLLED WITH A MIN 2 PASSES WITH A 5-TON VIBRATORY ROLLER IN 2 PERPENDICULAR DIRECTIONS
   - 4.3. EXPOSED, LOAD-BEARING BEDROCK IS TO BE CLEARED OF LOOSE AND WEATHERED ROCK
   - 4.4. EXPOSED RUBBLE FILL BELOW FOOTINGS IS TO BE REMOVED DOWN TO THE NATIVE GLACIAL TILL SOIL AND OUTWARDS EQUAL TO A DISTANCE OF THE FOOTING WIDTH
   - 4.5. VOIDS IN RUBBLE FILL ARE TO BE FILLED WITH ¾" CRUSHED STONE OR AN APPROVED ALTERNATIVE
   - 4.6. ROCK ANCHORS SHALL BE INSTALLED PER REPORT IF ADDITIONAL FOUNDATION UPLIFT CAPACITY IS NEEDED
   - 4.7. SLAB SUBGRADE TO BE OBSERVED BY SGS CONTRACTOR TO COORDINATE
5. MAINTAIN MIN 2' COVER ON ALL STORM AND SEVER DRAINS. IUSE OF ELBOWS TO MINIMIZE ROCK EXCAVATION IS ALLOWED FOR PRIVATE UTILITIES.
6. CONTRACTOR TO TEST PIT TO DETERMINE EXACT ELEVATION OF THE FLOOR DRAIN CONNECTION TO THE EXISTING WATERMAIN.



CIVIL CROSS SECTION A3-5

FINAL: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY / DATE
PC PROGRESS SET	WHS 8/21/15
COMMENT/RESPONSE	WHS 9/15/15
FINAL SUBMISSION	WHS 10/13/15

REVISION	REV. DATE

DRAWING NAME: CROSS SECTION-1

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8816 PORTLAND, ME 04104

A C O R N ENGINEERING, INC.

ACORN ENGINEERING, INC. 158 DANFORTH STREET PORTLAND, MAINE 04102 (207) 775-2655

FILE:	1060_DETAILS
DATE:	8/21/15
JN:	1060
SCALE:	1:50
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11415 9-15-15 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.

C-50

TOTAL PARKING SUMMARY	
PARKING DIMENSION (FT)	# PARKING SPACES
8X15	4
8X18	1
8.5X15	6
8.5X18	15
ADA 8X18	4
9X18	51
TOTAL SPACES	81

UNIT TABULATION: 139 TOTAL UNITS	
UNIT NUMBER	SIZE (S.F.)
717, 817	403
210, 211, 214, 215, 310, 311, 314, 315, 410, 411, 414, 415, 510, 511, 514, 515, 610, 611, 614, 615, 710, 711, 714, 715, 810, 811, 814, 815	412
318, 418, 518, 618	545
216, 316, 416, 516, 616	551
716, 816	552
718, 818	577
703, 704, 803, 804	580
203, 303, 403, 503, 603	585
204	586
304, 404, 504, 604	587
205, 217, 305, 317, 405, 417, 505, 517, 605, 617, 705, 805	597
707, 807	610
207	614
208, 209, 212, 213, 307, 308, 309, 312, 313, 407, 408, 409, 412, 413, 507, 508, 509, 512, 513, 607, 608, 609, 612, 613, 709, 712, 713, 809, 812, 813	615
701, 801	633
702, 802	634
719, 819	639
201, 202, 301, 401, 501, 601	648
302, 402, 502, 602	649
206, 306, 406, 506, 606, 706, 708, 806, 808	651
320, 420, 520, 620	704
319, 419, 519, 619	1002
321, 421, 521, 621	1097

SUBDIVISION PLAT NOTES:

1. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 46 BLOCK C LOTS 19 AND 20, LISTED AS 667 CONGRESS STREET.
2. AREA OF LOCUS PARCEL, INCLUDING EASEMENT, IS 26,127 SQUARE FEET (0.60 ACRE)
3. LOCUS PARCEL NOT FOUND TO BE LOCATED WITHIN A FEMA FLOOD ZONE.
4. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNERBOARDS AND NOT BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
5. VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES BY ADEQUATE SNOW REMOVAL IN ACCORDANCE WITH THE PROJECT SNOW STORAGE PLAN.
6. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO 139 DWELLING UNITS IN A NEW MIXED-USE BUILDING TO BE CONSTRUCTED ON THE SUBJECT PROPERTY. APPROVAL OF THIS PLAT DOES NOT CREATE ANY SUBDIVISION OF THE LAND ON THE SUBJECT PROPERTY.
7. THE SIGNATURES OF THE CITY OF PORTLAND PLANNING BOARD ON THIS SUBDIVISION PLAT CONSTITUTE SUBDIVISION APPROVAL FOR THE CREATION OF 139 RESIDENTIAL UNITS. THE NON-RESIDENTIAL UNITS ARE NOT SUBJECT TO SUBDIVISION REGULATION.
8. MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, PRIVATE UTILITIES, AND SNOW REMOVAL SHALL BE THE RESPONSIBILITY OF THE OWNER.
9. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
10. STATE PLANE COORDINATES RETRIEVED FROM EXISTING CONDITIONS PLAN PROVIDED BY TITCOMB ASSOCIATES.

GENERAL NOTES AND REFERENCES:

1. ZONING ANALYSIS COMPLETED BY RYAN SENATORE ARCHITECTURE.
2. FOR INFORMATION REGARDING PROPOSED UTILITY CHANGES, REFER TO UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING CHANGES, REFER TO GRADING PLAN, SHEET C-30 AND C-31, MOST RECENT VERSION.
4. TOTAL SITE AREA INCLUDES 0.60 ACRE. R.O.W. WIDTHS FOR AVON STREET AND VERNON PLACE ARE 22-FEET. R.O.W. WIDTH FOR CONGRESS IS 66-FEET PER EXISTING CONDITIONS PLAN. SEE EXISTING CONDITIONS PLAN PROVIDED BY TITCOMB ASSOCIATES INDICATING PROPERTY LINES ALONG CONGRESS STREET SIDE OF PROPERTY, DATED 4/6/15.
5. LIGHTING PLAN: REFER TO THE PLAN DEVELOPED BY APEX LIGHTING SOLUTIONS, TITLED GARAGE LIGHTING PHOTOMETRIC CALCULATIONS, MOST RECENT VERSION.
6. SITE BOUNDARIES PER EXISTING CONDITIONS PLAN AND PROPERTY PINS TO BE SET BY TITCOMB ASSOCIATES
7. PER CITY OF PORTLAND COUNCIL ORDER 274 ON 6/15/15 PASSED 8-0, THE PROPOSED SITE AT 667 CONGRESS STREET HAS BEEN RE-ZONED FROM R-6 TO B-3, AND MAXIMUM BUILDING HEIGHT INCREASED TO 65 FEET ON THE MAJORITY OF THE SITE; FOR THE REMAINDER OF THE SITE, 40 FEET FROM THE REAR PROPERTY LINE, MAINTAINS A MAXIMUM BUILDING HEIGHT OF 45 FEET.
8. UNIT TABULATION ON SHEET SP-1 BASED OFF DRAWINGS BY RYAN SENATORE ARCHITECTURE.
9. PLEASE SEE ARCHITECTURAL PLANS FOR FURTHER INFORMATION REGARDING FLOOR PLANS AND BUILDING HEIGHT.
10. THE SURROUNDING ZONES ARE AS FOLLOWS:
   10.1. R-6 ZONE ON NORTH AND NORTHWEST WALLS OFF OF AVON STREET
   10.2. B-3 ZONE ON THE SOUTH, SOUTHEAST, AND SOUTHWEST WALLS OFF OF CONGRESS STREET, AVON STREET, AND VERNON PLACE
11. PER A REVIEW OF NATIONAL REGISTER OF HISTORIC PLACES ARCHIVES DATED 10/5/2015, NO LISTED PROPERTIES WERE FOUND TO BE DIRECTLY ADJACENT TO THE PROPOSED DEVELOPMENT. THE PROPOSED DEVELOPMENT IS PARTIALLY OR WHOLLY WITHIN A HISTORIC DISTRICT WITHIN THE CITY OF PORTLAND; PLEASE REFER TO RYAN SENATORE ARCHITECTURE DRAWINGS REGARDING ZONING AND APPROVALS.

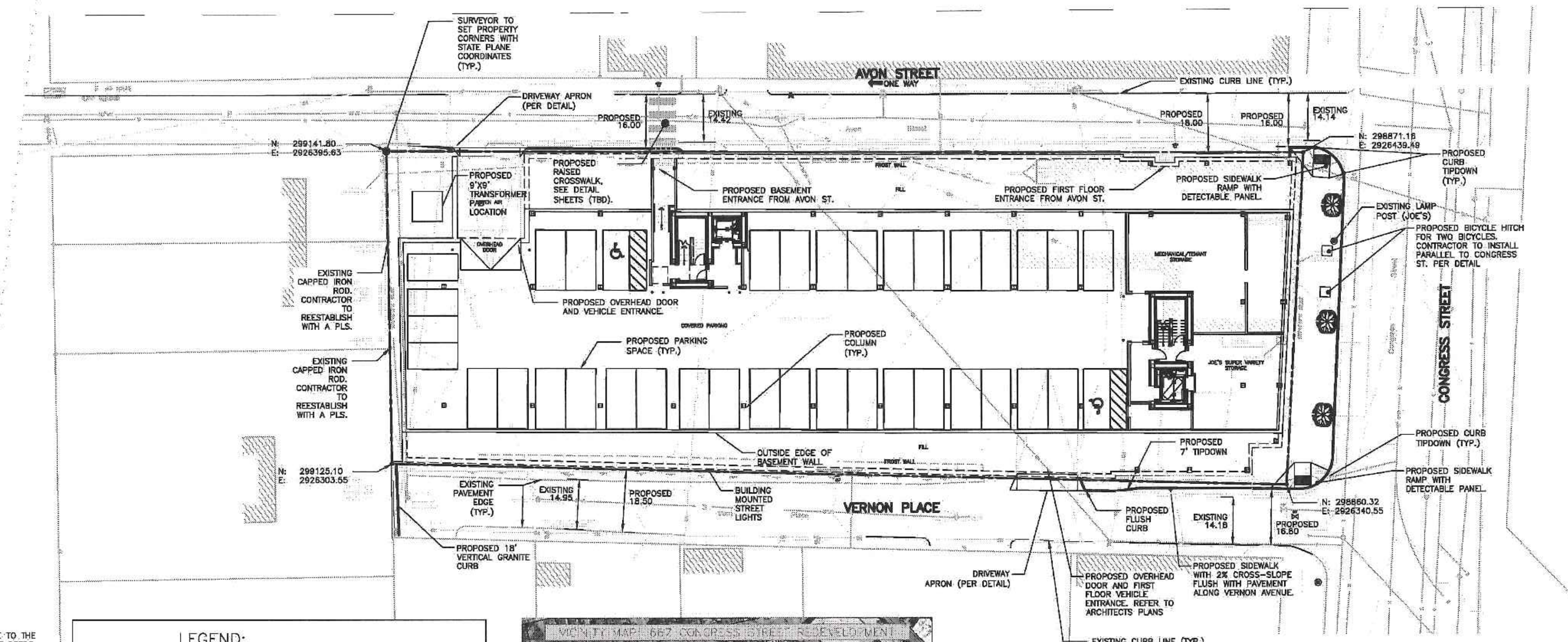
WAIVERS & CONDITIONS OF APPROVAL:

[TBD]

SPACE AND BULK STANDARDS		
ZONE: B3	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	26,126 SF
MINIMUM STREET FRONTAGE	15'	641'
STREET WALL LINE MAX SETBACK	5'	2'
MIN YARD DIMENSIONS	NONE	–
MIN LOT WIDTH	NONE	–
MAX LOT COVERAGE	100%	100%
MAX BLANK FACADE (CONGRESS ONLY)	15'	3'
MAX. BLANK FACADE (VERNON/AVON ONLY)	30'	12'
MAXIMUM BUILDING HEIGHT	65'	65' FROM AVERAGE GRADE
MAXIMUM STREET WALL	65'	65'
MIN BLG HEIGHT WITHIN 50' OF STREET	35'	65'
RES. DENSITY	NO LIMIT	139
PARKING	1/UNIT = 139	81
MIN. INTERNAL RESIDENT BIKE STORAGE SPACES	2 SPACES/5 D.U. =55.6	56
PAD OVERLAY 75% STREET FACADE	20' DEEP RETAIL	80%
*80 PARKING SPACES IN ADDITION TO 1 SHARED VEHICLE SPACE		

PLAN REFERENCES

1. PLAN OF PROPERTY AT PORTLAND MADE FOR SAINT STEPHEN CHURCH BY H.I. & E.C. JORDAN CIVIL ENGINEERS DATED JUNE, 1947.
2. CONDOMINIUM PLAN MADE FOR MARYELLEN SULLIVAN BY NORTHEAST CIVIL SOLUTIONS DATED OCTOBER 20, 2006 RECORDED IN PLAN BOOK 207, PAGE 390.
3. CONDOMINIUM PLAT DEERING HEIGHTS CONDOMINIUMS MADE FOR 24 DEERING STREET, LLC BY OWEN HASKELL, INC. RECORDED IN PLAN BOOK 215, PAGE 49.
4. RIGHT OF WAY PLANS PROVIDED BY THE CITY OF PORTLAND PUBLIC SERVICES ENGINEERING DEPARTMENT.
5. CITY OF PORTLAND, MAINE DEPARTMENT OF PUBLIC WORKS VERNON PLACE SURFACE WATER DRAIN DATED NOVEMBER 21, 1951, FILE NUMBER 638/14.
6. CITY OF PORTLAND, MAINE DEPARTMENT OF PUBLIC WORKS VERNON PLACE NEW SEWER (PRIVATE) DATED MARCH 11, 1934, FILE NUMBER 409/56.
7. EXISTING CONDITIONS SURVEY MADE FOR REDFERN PROPERTIES BY TITCOMB ASSOCIATES DATED APRIL 6, 2015.



SURVEYORS NOTES

1. BOOK AND PAGE REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
2. BEARINGS ARE REFERENCED TO GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, NAD83, WEST ZONE.
3. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM.
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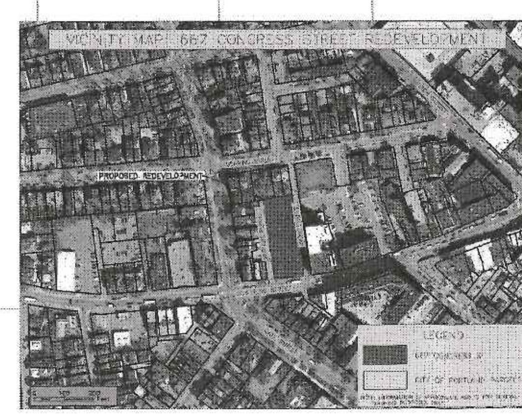
OWNERS OF RECORD

MSD PROPERTIES, LLC
P.O. BOX 8816 PORTLAND, MAINE
BOOK 30720, PAGE 250

LEGEND:

PROPOSED CURB	
EXISTING/PROPOSED BUILDING	
PROPERTY LINE	
CITY LIGHT POLE	
PROPOSED WALL ANCHOR EASEMENT	
PROPOSED DRAINAGE EASEMENT	
PROPOSED SIDEWALK EASEMENT	
PROPOSED ROADWAY EASEMENT	



OWNER/SUBDIVIDER:

REDFERN PROPERTIES LLC
PORTLAND, MAINE
CONTACT: JONATHAN CULLEY

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.

SURVEYOR:

TITCOMB ASSOCIATES
PORTLAND, MAINE
CONTACT: REX CROTEAU, PLS

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS

RECEIVED: ______
RECORDED IN ______
ATTEST: ______ REGISTRAR

APPROVED: PORTLAND PLANNING BOARD
CHAIRPERSON: ______ DATE: ______

CERTIFICATION

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

Rex J. Croteau, P.L.S. #2273

STATE OF MAINE
REX J. CROTEAU
#2273
PROFESSIONAL LAND SURVEYOR

ISSUED FOR	BY / DATE
FINAL APPLICATION	WHS 10/13/15

REVISION	REV. / DATE

DRAWING NAME: SUBDIVISION PLAT: BASEMENT FLOOR

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND MAINE 04102
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1060_CONGRESS
DATE:	9/15/15
JN:	1060
SCALE:	1"=20'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
10-13-15
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.

SP-1

GENERAL NOTES AND REFERENCES:
1. ZONING ANALYSIS COMPLETED BY RYAN SENATORE ARCHITECTURE.
2. FOR INFORMATION REGARDING PROPOSED UTILITY CHANGES, REFER TO UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING CHANGES, REFER TO GRADING PLAN, SHEET C-30 AND C-31, MOST RECENT VERSION.
4. TOTAL SITE AREA INCLUDES 0.60 ACRE. R.O.W. WIDTHS FOR AVON STREET AND VERNON PLACE ARE 22-FEET. R.O.W. WIDTH FOR CONGRESS IS 86-FEET PER EXISTING CONDITIONS PLAN. SEE EXISTING CONDITIONS PLAN PROVIDED BY TITCOMB ASSOCIATES INDICATING PROPERTY LINES ALONG CONGRESS STREET SIDE OF PROPERTY, DATED 4/6/15.
5. LIGHTING PLAN: REFER TO THE PLAN DEVELOPED BY APEX LIGHTING SOLUTIONS, TITLED GARAGE LIGHTING PHOTOMETRIC CALCULATIONS, MOST RECENT VERSION.
6. SITE BOUNDARIES PER EXISTING CONDITIONS PLAN AND PROPERTY PINS TO BE SET BY TITCOMB ASSOCIATES
7. PER CITY OF PORTLAND COUNCIL ORDER 274 ON 6/15/15 PASSED 8-0, THE PROPOSED SITE AT 667 CONGRESS STREET HAS BEEN RE-ZONED FROM R-6 TO B-3, AND MAXIMUM BUILDING HEIGHT INCREASED TO 65 FEET ON THE MAJORITY OF THE SITE; FOR THE REMAINDER OF THE SITE, 40 FEET FROM THE REAR PROPERTY LINE, MAINTAINS A MAXIMUM BUILDING HEIGHT OF 45 FEET.
8. UNIT TABULATION ON SHEET SP-1 BASED OFF DRAWINGS BY RYAN SENATORE ARCHITECTURE.
9. PLEASE SEE ARCHITECTURAL PLANS FOR FURTHER INFORMATION REGARDING FLOOR PLANS AND BUILDING HEIGHT.
10. THE SURROUNDING ZONES ARE AS FOLLOWS:
    10.1. R-6 ZONE ON NORTH AND NORTHWEST WALLS OFF OF AVON STREET
    10.2. B-3 ZONE ON THE SOUTH, SOUTHEAST, AND SOUTHWEST WALLS OFF OF CONGRESS STREET, AVON STREET, AND VERNON PLACE
11. PER A REVIEW OF NATIONAL REGISTER OF HISTORIC PLACES ARCHIVES DATED 10/5/2015, NO LISTED PROPERTIES WERE FOUND TO BE DIRECTLY ADJACENT TO THE PROPOSED DEVELOPMENT. THE PROPOSED DEVELOPMENT IS PARTIALLY OR WHOLLY WITHIN A HISTORIC DISTRICT WITHIN THE CITY OF PORTLAND; PLEASE REFER TO RYAN SENATORE ARCHITECTURE DRAWINGS REGARDING ZONING AND APPROVALS.

SUBDIVISION PLAT NOTES:
1. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 46 BLOCK C LOTS 19 AND 20, LISTED AS 667 CONGRESS STREET.
2. AREA OF LOCUS PARCEL, INCLUDING EASEMENT, IS 26,127 SQUARE FEET (0.60 ACRE)
3. LOCUS PARCEL NOT FOUND TO BE LOCATED WITHIN A FEMA FLOOD ZONE.
4. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNERBOARDS AND NOT BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
5. VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES BY ADEQUATE SNOW REMOVAL IN ACCORDANCE WITH THE PROJECT SNOW STORAGE PLAN.
6. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO 139 DWELLING UNITS IN A NEW MIXED-USE BUILDING TO BE CONSTRUCTED ON THE SUBJECT PROPERTY. APPROVAL OF THIS PLAT DOES NOT CREATE ANY SUBDIVISION OF THE LAND ON THE SUBJECT PROPERTY.
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8. MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, PRIVATE UTILITIES, AND SNOW REMOVAL SHALL BE THE RESPONSIBILITY OF THE OWNER.
9. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
10. STATE PLANE COORDINATES RETRIEVED FROM EXISTING CONDITIONS PLAN PROVIDED BY TITCOMB ASSOCIATES.

WAIVERS & CONDITIONS OF APPROVAL:
[TBD]

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3. CONDOMINIUM PLAT DEERING HEIGHTS CONDOMINIUMS MADE FOR 24 DEERING STREET, LLC BY OWEN HASKELL, INC. RECORDED IN PLAN BOOK 215, PAGE 49.
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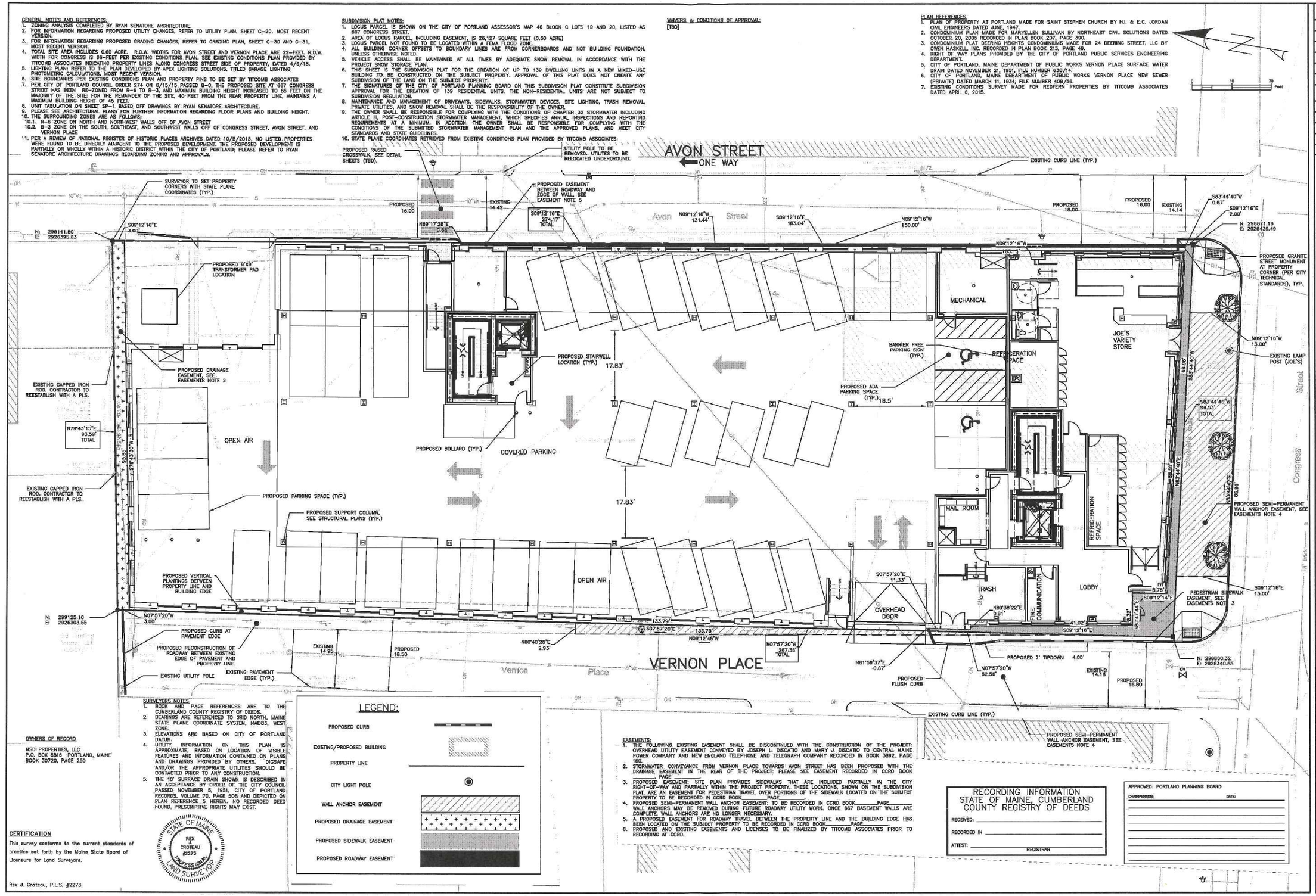

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OWNERS OF RECORD

MSD PROPERTIES, LLC
P.O. BOX 6816 PORTLAND, MAINE
BOOK 30720, PAGE 250

CERTIFICATION

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STATE OF MAINE REX J CROTEAU #2273 PROFESSIONAL LAND SURVEYOR

Rex J. Croteau, P.L.S. #2273

LEGEND:

- PROPOSED CURB
- EXISTING/PROPOSED BUILDING
- PROPERTY LINE
- CITY LIGHT POLE
- WALL ANCHOR EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED SIDEWALK EASEMENT
- PROPOSED ROADWAY EASEMENT

EASEMENTS:
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2. STORMWATER CONVEYANCE FROM VERNON PLACE TOWARDS AVON STREET HAS BEEN PROPOSED WITH THE DRAINAGE EASEMENT IN THE REAR OF THE PROJECT: PLEASE SEE EASEMENT RECORDED IN CCRD BOOK _____ PAGE _____
3. PROPOSED EASEMENT: SITE PLAN PROVIDES SIDEWALKS THAT ARE INCLUDED PARTIALLY IN THE CITY RIGHT-OF-WAY AND PARTIALLY WITHIN THE PROJECT PROPERTY. THESE LOCATIONS, SHOWN ON THE SUBDIVISION PLAT, ARE AN EASEMENT FOR PEDESTRIAN TRAVEL OVER PORTIONS OF THE SIDEWALK LOCATED ON THE SUBJECT PROPERTY TO BE RECORDED IN CCRD BOOK _____ PAGE _____
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RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS
RECEIVED: _____
RECORDED IN _____
ATTEST: _____ REGISTRAR

APPROVED: PORTLAND PLANNING BOARD
CHAIRPERSON: _____ DATE: _____

ISSUED FOR	BY	DATE
FINAL APPLICATION	WHS	9/15/15
REVISION	REV.	DATE

DRAWING NAME: SUBDIVISION PLAT: FIRST FLOOR
PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT
CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 8816 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC. 158 DAVISPORTH STREET, PORTLAND MAINE 04102 (207) 775-2535

FILE:	1060_CONGRESS
DATE:	9/15/15
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H SAVAGE No. 11419 10-13-15 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
SP-2

Att. 6a

GENERAL NOTES AND REFERENCES:

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WAIVERS & CONDITIONS OF APPROVAL:

[TBD]

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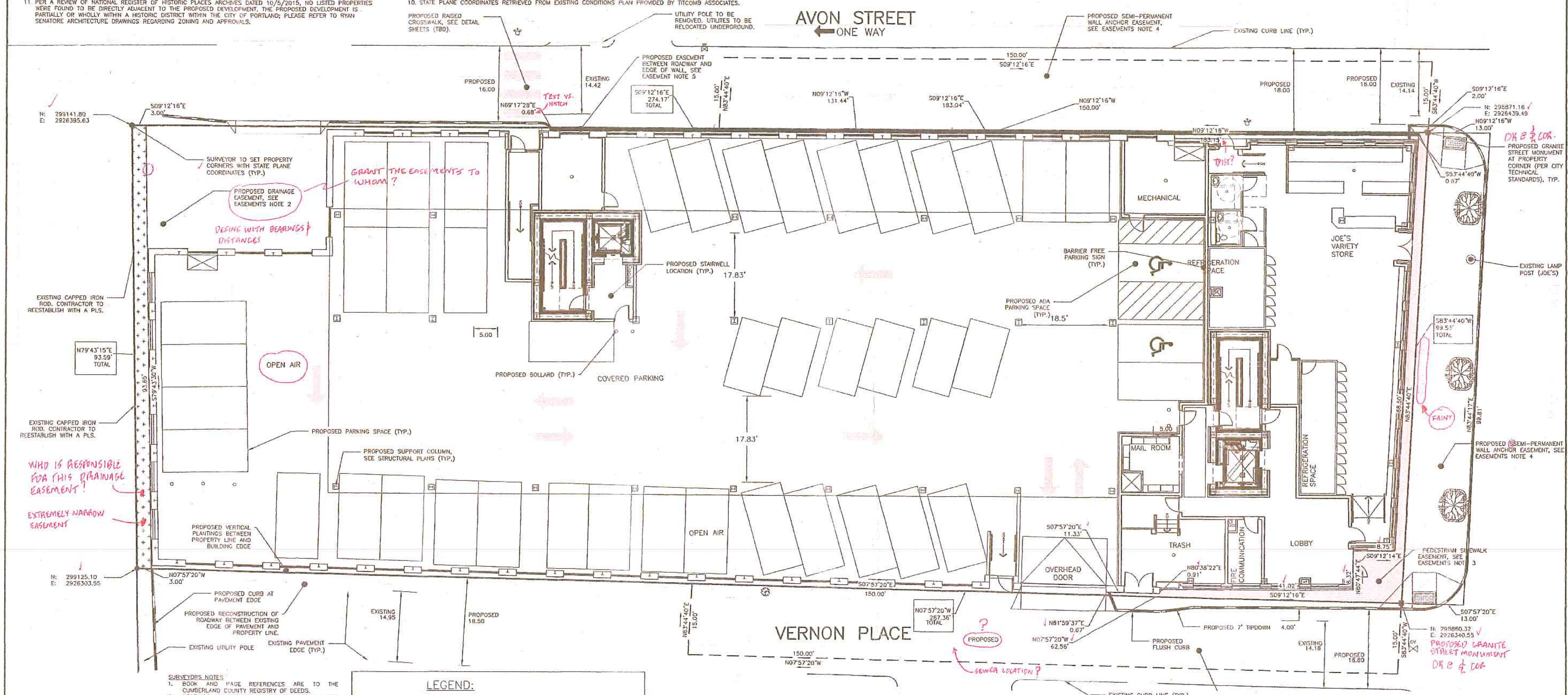

LEGEND:

PROPOSED CURB	
EXISTING/PROPOSED BUILDING	
PROPERTY LINE	
CITY LIGHT POLE	
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OWNERS OF RECORD

MSD PROPERTIES, LLC
P.O. BOX 8816 PORTLAND, MAINE
BOOK 30720, PAGE 250

CERTIFICATION

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

STATE OF MAINE · REX J. CROTEAU #2273 · PROFESSIONAL LAND SURVEYOR

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EASEMENTS:

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3. PROPOSED EASEMENT: SITE PLAN PROVIDES SIDEWALKS THAT ARE INCLUDED PARTIALLY IN THE CITY RIGHT-OF-WAY AND PARTIALLY WITHIN THE PROJECT PROPERTY. THESE LOCATIONS, SHOWN ON THE SUBDIVISION PLAT, ARE AN EASEMENT FOR PEDESTRIAN TRAVEL OVER PORTIONS OF THE SIDEWALK LOCATED ON THE SUBJECT PROPERTY TO BE RECORDED IN CCRD BOOK______PAGE______.
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RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS

RECEIVED: ______

RECORDED IN ______

ATTEST: ______ REGISTRAR

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: ______ DATE: ______

SURVEY REVIEW 10/21/15

ISSUED FOR	BY / DATE
FINAL APPLICATION	WHS 10/13/15
REVISION	REV. / DATE

DRAWING NAME: SUBDIVISION PLAT: FIRST FLOOR

PROJECT NAME: 667 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8616 PORTLAND, MAINE, 04104

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ACORN ENGINEERING, INC. 158 DANFORTH STREET, PORTLAND MAINE 04102 (207) 775-2655

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FILE:	1060_CONGRESS
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DESIGNED BY:	OJD
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE · WILLIAM H. SAVAGE · No. 11419 · 10-13-15 · LICENSED · PROFESSIONAL ENGINEER

DRAWING NO.

SP-2

665 **CONGRESS**

FEBRUARY 23, 2015

NEIGHBORHOOD BIRDSEYE VIEW

SCALE : NTS

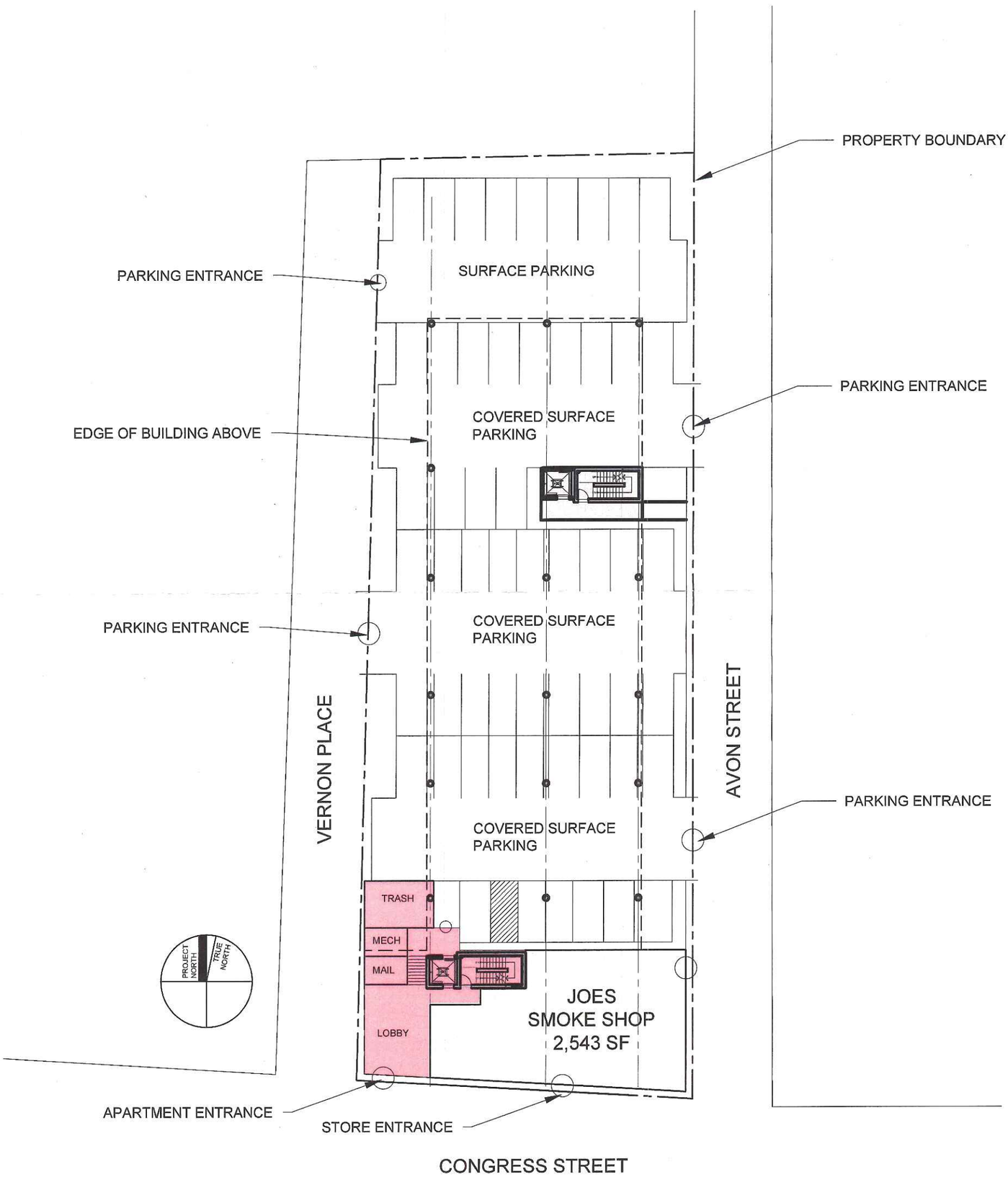
REDFERN PROPERTIES

RYAN SENATORE **ARCHITECTURE**

PROGRESS PRINT ONLY
Not for Construction

665 CONGRESS

MARCH 5, 2015



FIRST FLOOR PLAN

SCALE : 1/32" = 1'-0"

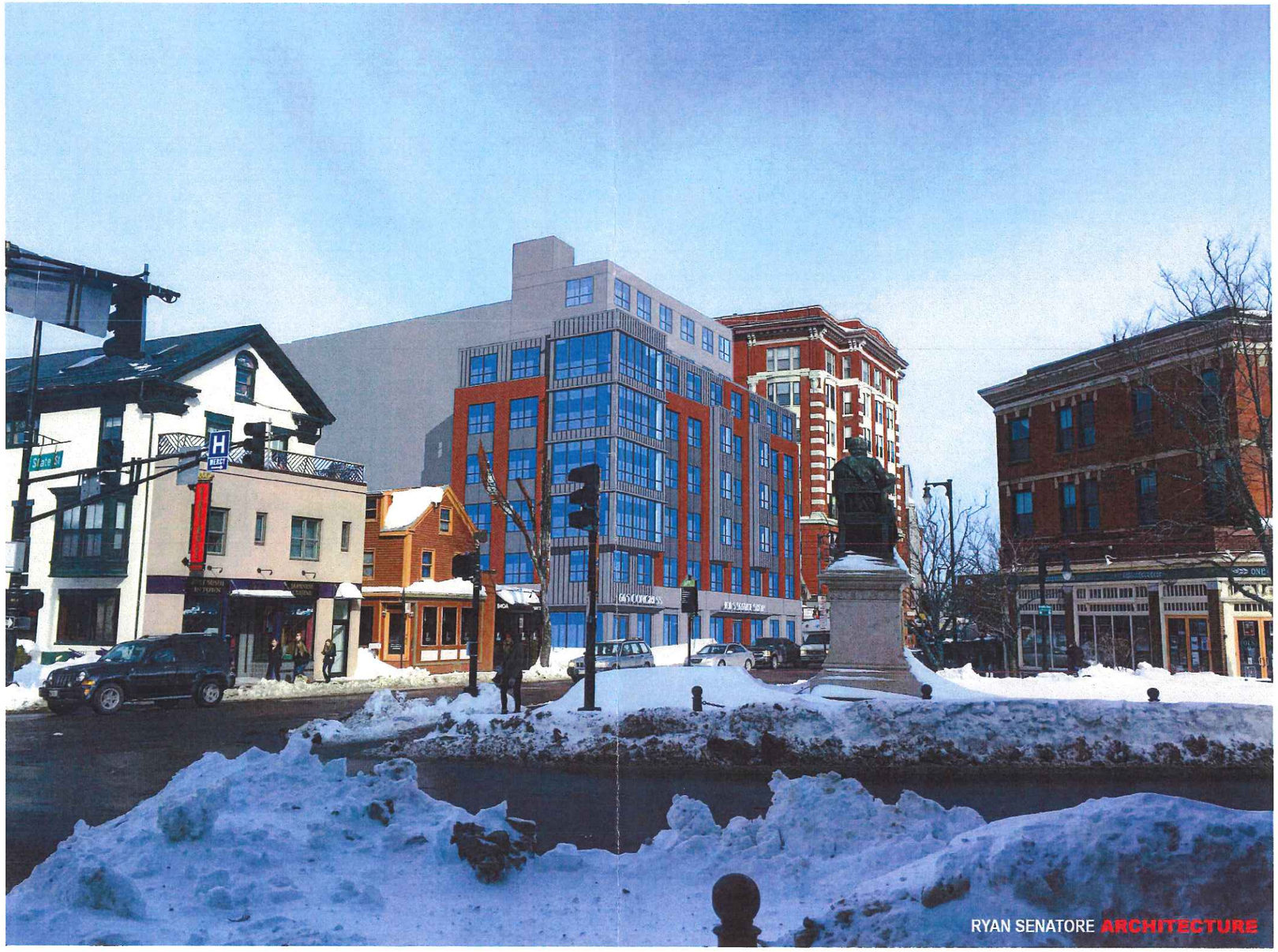
PROGRESS PRINT ONLY
Not for Construction

REDFERN PROPERTIES

RYAN SENATORE **ARCHITECTURE**

665 **CONGRESS**

MARCH 5, 2015



REDFERN PROPERTIES

CONGRESS STREET RENDERING

SCALE : NTS

PROGRESS PRINT ONLY
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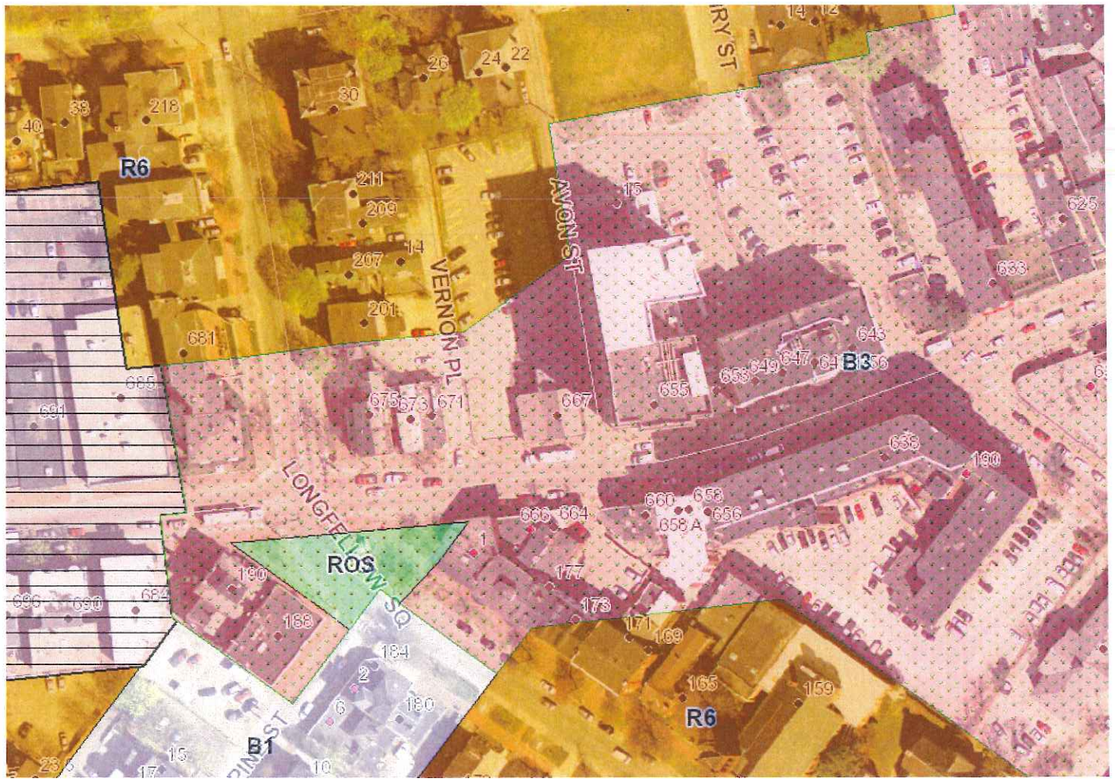
RYAN SENATORE **ARCHITECTURE**

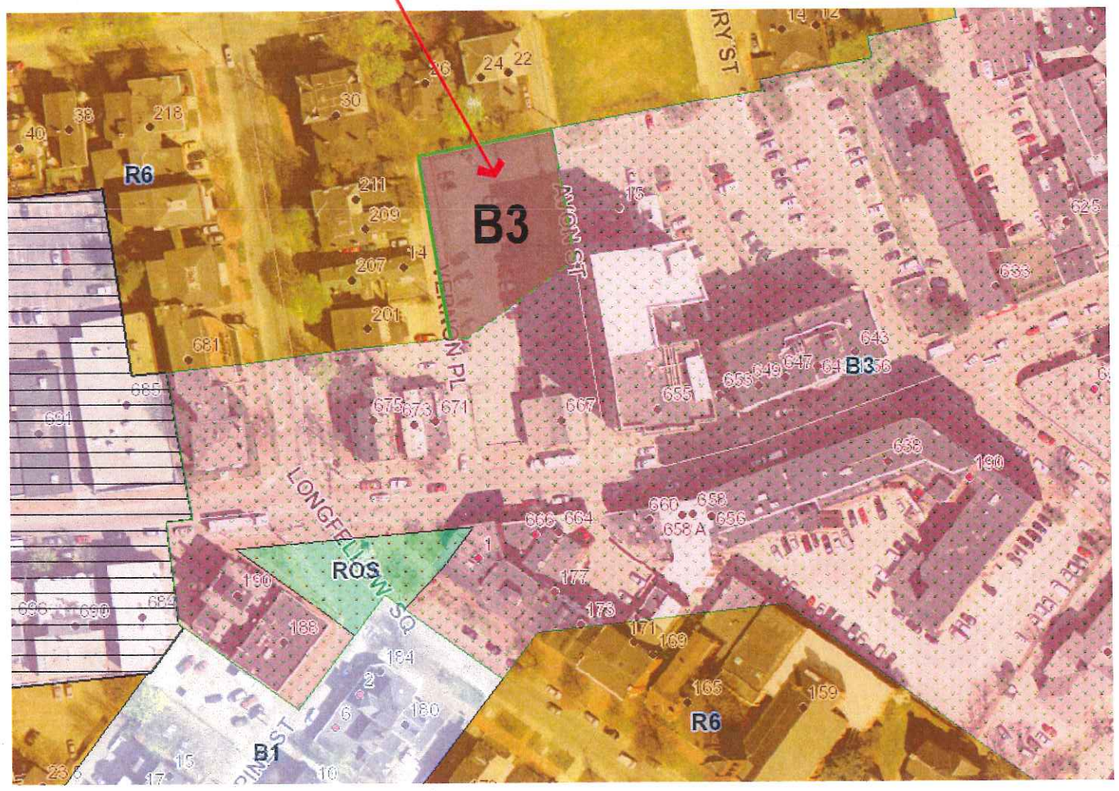
665 **CONGRESS**

FEBRUARY 23, 2015

PROPOSED AREA TO BE REZONED TO B3



EXISTING ZONING MAP



PROPOSED ZONING MAP

PROGRESS PRINT ONLY
Not for Construction

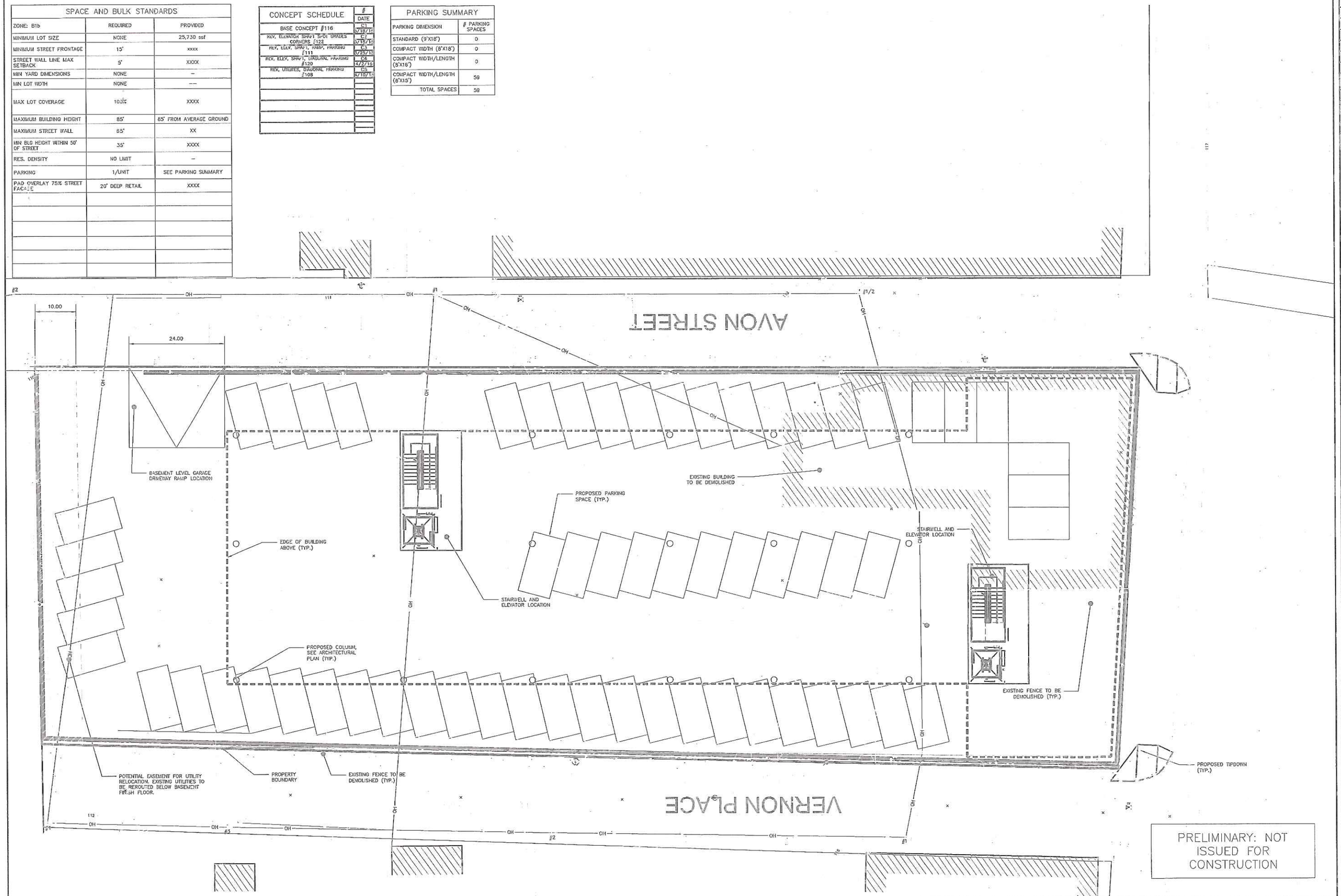
REDFERN PROPERTIES

RYAN SENATORE **ARCHITECTURE**

SPACE AND BULK STANDARDS		
ZONE: B1b	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	25,730 ssf
MINIMUM STREET FRONTAGE	15'	xxxx
STREET WALL LINE MAX SETBACK	5'	XXXX
MIN YARD DIMENSIONS	NONE	--
MIN LOT WIDTH	NONE	--
MAX LOT COVERAGE	100%	XXXX
MAXIMUM BUILDING HEIGHT	85'	65' FROM AVERAGE GROUND
MAXIMUM STREET WALL	85'	XX
MIN BLG HEIGHT WITHIN 50' OF STREET	35'	XXXX
RES. DENSITY	NO LIMIT	--
PARKING	1/UNIT	SEE PARKING SUMMARY
PAD OVERLAY 75% STREET FACADE	20' DEEP RETAIL	XXXX

CONCEPT SCHEDULE	# DATE
BASE CONCEPT #116	C1 5/18/15
REV. ELEVATOR SHAFT S-01 GRADES CORNERS #122	C2 9/15/15
REV. ELEV. SHAFT, RAMP, PARKING #111	C3 9/25/15
REV. ELEV. SHAFT, ORIGINAL PARKING #120	C4 9/2/15
REV. UTILITIES, DIAGONAL PARKING #108	C5 9/18/15

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	0
COMPACT WIDTH (8'X18')	0
COMPACT WIDTH/LENGTH (8'X16')	0
COMPACT WIDTH/LENGTH (8'X15')	59
TOTAL SPACES	59



PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
REVISION	REV. DATE

DRAWING NAME: SITE PLAN: BASEMENT

PROJECT NAME: 665 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC. P.O. BOX 8616 PORTLAND, MAINE, 04104

ACORN ENGINEERING, INC. 154 YORK STREET, PORTLAND MAINE 04101 (207) 775-4655

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAC
DRAWN BY:	MAC
CHECKED BY:	WHS

DRAWING NO. C-10

SPACE AND BULK STANDARDS		
ZONE: B1b	REQUIRED	PROVIDED
MINIMUM LOT SIZE	NONE	25,730 ssf
MINIMUM STREET FRONTAGE	15'	xxxx
STREET WALL LINE MAX SETBACK	5'	XXXX
MIN YARD DIMENSIONS	NONE	–
MIN LOT WIDTH	NONE	– –
MAX LOT COVERAGE	100%	XXXX
MAXIMUM BUILDING HEIGHT	85'	65' FROM AVERAGE GROUND
MAXIMUM STREET WALL	65'	XX
MIN BLD HEIGHT WITHIN 50' OF STREET	35'	XXXX
RES. DENSITY	NO LIMIT	–
PARKING	1/UNIT	SEE PARKING SUMMARY
PAD OVERLAY 75% STREET FACADE	20' DEEP RETAIL	XXXX

PARKING SUMMARY	
PARKING DIMENSION	# PARKING SPACES
STANDARD (9'X18')	5
STANDARD PARALLEL (9'X22')	0
COMPACT WIDTH/LENGTH (8'X16')	0
COMPACT WIDTH/LENGTH (8'X15')	44
TOTAL SPACES	49

CONCEPT SCHEDULE	#	
	DATE	
BASE CONCEPT #116	C1	3/18/15
REV. ELEVATOR SHAFT SPOT GRADES CORNERS #122	C2	3/18/15
REV. ELEV. SHAFT, RAMP, PARKING #111	C3	3/25/15
REV. ELEV. SHAFT, ORIGINAL PARKING #120	C4	4/2/15
REV. DIMENS. ORIGINAL PARKING #103	C5	4/10/15

ABUTTING CURB CUT

AVON STREET

VERNON PLACE

JOES SMOKE SHOP 2,543 SF

EXISTING BUILDING TO BE DEMOLISHED

PROPOSED PARKING SPACE (TYP.)

EDGE OF BUILDING ABOVE (TYP.)

STAIRWELL AND ELEVATOR LOCATION

PROPOSED ADA PARKING SPACE (TYP.)

PROPOSED COLUMN, SEE ARCHITECTURAL PLAN (TYP.)

24.00

TRASH

MECH

MAIL

LOBBY

EXISTING FENCE TO BE DEMOLISHED (TYP.)

PROPOSED TIPDOWN (TYP.)

PROPOSED CURB TIPDOWN (TYP.)

POTENTIAL EASEMENT FOR UTILITY RELOCATION. EXISTING UTILITIES TO BE REROUTED BELOW BASEMENT FINISH FLOOR.

PROPERTY BOUNDARY

EXISTING FENCE TO BE DEMOLISHED (TYP.)

CONTRACTOR TO REMOVE EXISTING TREE

GROUND LEVEL GARAGE DRIVEWAY RAMP LOCATION

ABUTTING CURB CUT

PRELIMINARY: NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
REVISION	REV.	DATE

DRAWING NAME: SITE PLAN: GROUND LEVEL

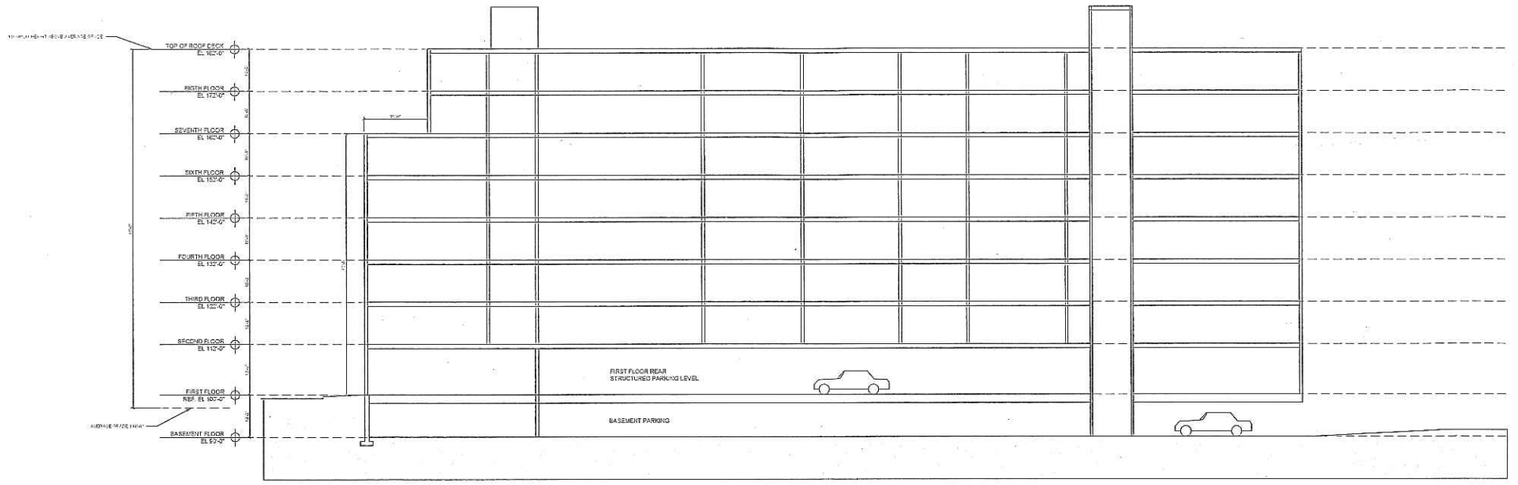
PROJECT NAME: 665 CONGRESS STREET REDEVELOPMENT

CLIENT: REDFERN PROPERTIES, LLC.
P.O. BOX 9516 PORTLAND, MAINE, 04104

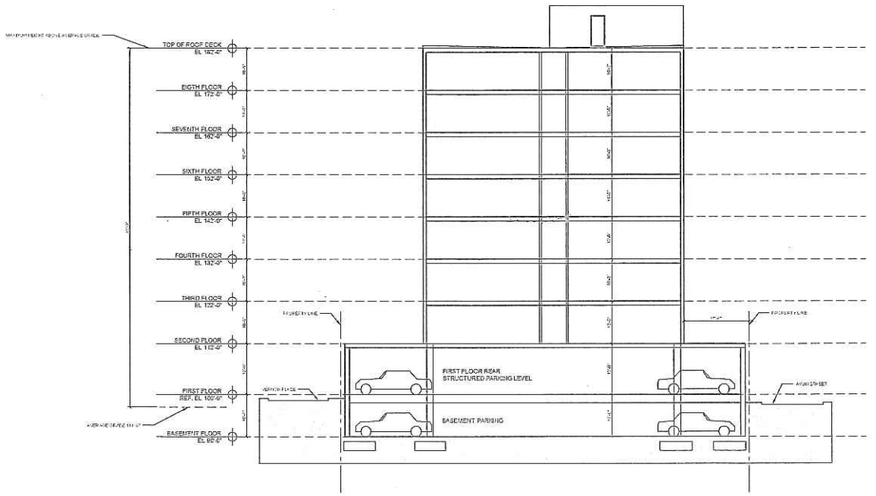
ACORN ENGINEERING, INC.
154 YORK STREET, BIDDEFORD, MAINE 04101
(207) 775-2655

FILE:	1060_CONGRESS
DATE:	4/6/2015
JN:	1060
SCALE:	1"=10'
DESIGNED BY:	MAQ
DRAWN BY:	MAQ
CHECKED BY:	WHS

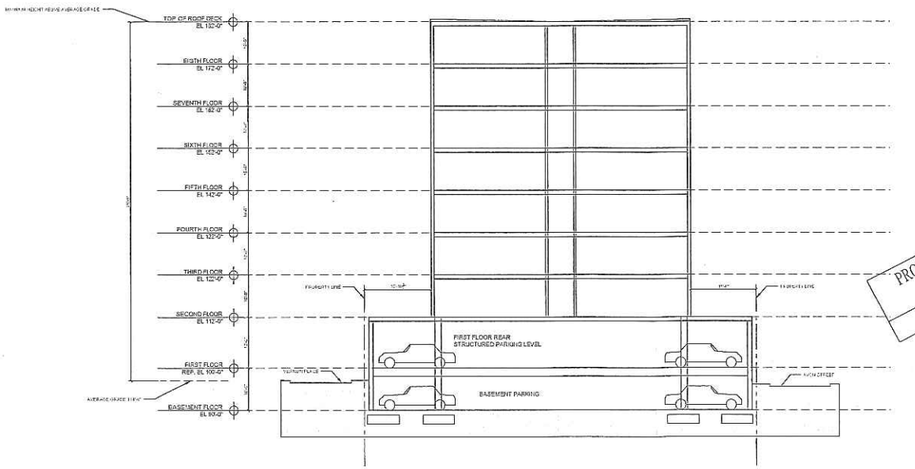
DRAWING NO.
C-11



1 SECTION
1/16" = 1'-0"



2 SECTION
1/16" = 1'-0"



3 SECTION
1/16" = 1'-0"

PROGRESS PRINT ONLY
Not for Construction
APRIL 2, 2015

665 CONGRESS STREET
APARTMENTS
PORTLAND, MAINE

RSA
RYAN SENATORE ARCHITECTURE
565 CONGRESS STREET
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

STRUCTURAL:
Structural Integrity
77 Oak Street
Portland, ME 04101
207-773-4494

REVISIONS:

DATE:	15 DECEMBER 2012
PROJECT No.	1503
DRAWN BY:	
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
SECTIONS

A3-0