420-A-1 2001-0160

383 Presumpscot St.

Building Addition

383 Presumpscot St. Inc.

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
Planning Copy

2001-0160
Application I. D. Number

06/26/2001
Application Date

383 Presumpscot Street Inc
Applicant

474 Lafayette St, Yarmouth, ME 04086
Applicant's Mailing Address

Presumpscot St. 1250 SqFt Addition
Project Name/Description

Fisher, Jim
Consultant/Agent

383 - 383 Presumpscot St, Portland, Maine
Address of Proposed Site

Agent Ph: (207)871-1290 Agent Fax:
Applicant or Agent Daytime Telephone, Fax

420 A001001
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☑ New Building ☐ Building Addition ☐ Change Of Use ☐ Residential ☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☐ Parking Lot ☐ Other (specify)

1250 SqFT
Proposed Building square Feet or # of Units

Acreage of Site

Zoning

**Check Review Required:**

☑ Site Plan (major/minor)
☐ Subdivision # of lots
☐ PAD Review
☐ 14-403 Streets Review
☐ Flood Hazard
☐ Shoreland
☐ HistoricPreservation
☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)
☐ Zoning Variance
☐ Other

Fees Paid: Site Plan Subdivision Engineer Review $6,033.28 Date 10/12/2001

## Planning Approval Status:

Reviewer Sarah Hopkins

☑ **Approved**
☐ **Approved w/Conditions** See Attached
☐ **Denied**

Approval Date 09/25/2001 Approval Expiration 09/25/2002 Extension to ☐ Additional Sheets Attached

☑ OK to Issue Building Permit Sarah Hopkins (signature) 11/01/2001 (date)

**Performance Guarantee** ☑ **Required*** ☐ **Not Required**

* No building permit may be issued until a performance guarantee has been submitted as indicated below

| | | | |
|---|---|---|---|
| ☑ Performance Guarantee Accepted | 11/01/2001 (date) | $335,213.56 (amount) | 09/25/2003 (expiration date) |
| ☐ Inspection Fee Paid | (date) | (amount) | |
| ☐ Building Permit Issue | (date) | | |
| ☐ Performance Guarantee Reduced | (date) | (remaining balance) | (signature) |
| ☐ Temporary Certificate of Occupancy | (date) | ☐ Conditions (See Attached) | (expiration date) |
| ☐ Final Inspection | (date) | (signature) | |
| ☐ Certificate Of Occupancy | (date) | | |
| ☐ Performance Guarantee Released | (date) | (signature) | |
| ☐ Defect Guarantee Submitted | (submitted date) | (amount) | (expiration date) |
| ☐ Defect Guarantee Released | (date) | (signature) | |

PLANNING BOARD REPORT #41-01

# PRESUMPSCOT STREET INTERMODAL FACILITY
# SITE PLAN REVIEW
# STORMWATER PERMIT REVIEW
# OCTOBER CORPORATION, APPLICANT

Submitted to:

Portland Planning Board
Portland, Maine

September 11, 2001

## I. INTRODUCTION

The October Corporation proposes to construct a park and ride lot/intermodal facility at 383 Presumpscot Street. The development site is located between Presumpscot Street and the St. Lawrence railroad. The facility will be constructed in three phases, for a total of 181 parking spaces and a 1250 square foot commuter station. The site is 4.08 acres and zoned Moderate Impact Industrial (IM).

The October Corporation will use this parking lot as a shuttle lot for employees located at the new office complex at the Pineland Center in New Gloucester, as well as workers in the October Corporation's downtown buildings. The facility will be serviced by a transit provider, and potentially by commuter rail service along the St. Lawrence line in the future.

## II. SUMMARY OF FINDINGS

| | |
|---|---|
| Zone: | IM |
| Surrounding Uses: | Industrial |
| Land Area: | 4.08 acres |
| Parking Spaces | |
| Phase I | 109 space parking lot |
| Phase II | 1250 sq. ft. commuter station |
| Phase III | 72 additional spaces |

## III. STAFF REVIEW

This development has been reviewed by staff for conformance with the review standards of the Site Plan Ordinance and Chapters 500 and 502 of the Maine DEP Regulations

1/2. Traffic

Vehicular Circulation

Traffic will enter the site from two curb cuts along Presumpscot Street. The parking area will be located off the horseshoe access drive that traverses the property. Landscaped islands will be installed between the rows of parking.

The applicant's engineer has submitted a site distance calculation for the proposed entrances and found that the available site distance exceeds the City's required distance for a 35 mph zone.

The applicant was also asked by the City Traffic Engineer to evaluate the proposal's impact on the capacity of the Washington Ave/Presumpscot intersection. The study found that there would be no significant degradation in the intersection's level of service and that the LOS would continue to operate at a level "B" during the morning peak hour and a level of "C" in the afternoon.

Pedestrian Safety

Since the last workshop on this item, the applicant has withdrawn its request for a sidewalk and curb waiver. Sidewalk, esplanade, and curb are proposed for the frontage of the property. Also, a pedestrian crosswalk is shown leading to the proposed Phase II shelter and a sidewalk and curb is indicated along the front of the shelter.

The City Traffic Engineer has reviewed the plans and traffic study. Mr. Ash's comments are included as Attachment 7c.

3/4. Bulk, location or height of proposed structures will not cause health or safety problems and minimize to the extent feasible diminutions in the value to neighboring properties.

The 1250 sq. ft. transit depot will be a single story with a standing seam metal roof. The building will house restrooms, a waiting room, office/storage area, and a mechanical room.

5. Sewers, Sanitary and Storm Drains, Water

Currently, the site is relatively flat with a slight slope toward the railroad property. The southern portion of the site drains toward a ravine containing a small stream.

A stormwater management report has been submitted which describes the post development stormwater rate of flow to be less than the predevelopment condition. The total build out of the site will result in an impervious surface of 1.57 acres.

Catchbasins have been proposed throughout the entire parking lot to catch run off and direct flows to a vortechnics 7000 structure.

A potential condition of approval:

- That an executed drainage maintenance agreement for the Vortechnics unit be provided by the applicant and approved by Corporation Counsel, prior to commencement of site work.

Electric and telephone lines exist on overhead poles along Presumpscot Street. These lines will be routed underground to the site. Since a sewer line does not exist along this portion of Presumpscot Street, the applicant proposes to install a subsurface wastewater disposal system on site. The septic system will be reviewed when a building permit is applied for.

The City's Reviewing Engineer has reviewed the plans and stormwater management report submitted by the applicant. Mr. Bushey's comments are included as Attachment 7b.

The Public Works Department has reviewed the plans and stormwater management and construction details. Mr. Lombardo's comments are included as Attachment 7a.

6/7. Landscaping

The landscaping plan for the entire site includes rows of Honey Locust, Pin Oak, Callery Pear, and Flowering Crab around and throughout the parking lot. Junipers and Lilacs are also proposed near the driveway entrances.

Since the last workshop on this item, the applicant has added a sidewalk, esplanade, and curb along the frontage of the site. The newly proposed esplanade allows an area along the curb for the planting of street trees. The applicant proposes to stagger the trees 20ft on center, on either side of the sidewalk. This design should provide an attractive streetscape along this stretch of Presumpscot Street.

8. Erosion and Sedimentation

Silt fence is shown around the perimeter of disturbed area along the southern portion of the site. Erosion control measures and details have been included in the plan and include hay bale barriers around the catchbasins, bark mulch sediment barriers, and construction entrance specifications.

9. Lighting

A revised lighting plan has been submitted by the applicant and is attached to this memo. 16ft high 250-watt high-pressure sodium lights have been proposed. According to the photometrics submitted, there will be no light spillover onto adjacent properties. The revised lighting plan has lowered the poles significantly (from 25 ft to 16 ft) and reduced the wattage of the lights.

10. Fire

The Fire Department has reviewed the proposal and has found emergency access to be sufficient.

11. Municipal Infrastructure

The construction of a sidewalk is an important aspect of this plan and is consistent with the City's planned infrastructure.

12. Financial and Technical Capacity

Information on financial and technical capacity has been submitted and is included as Attachment 5.

12. Natural resources including groundwater, surface water, habitat wetlands, unusual natural areas, and wildlife and fisheries.

There is a stream that traverses the southern portion of the site. All improvements and grading has been setback from the ravine and the stormwater will be cleaned and slowed down before entering the ravine. Otherwise, there are no known unusual or protected areas included in this parcel.

## IV. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of plans and materials submitted by the applicant and on the basis of information contained in Planning Report #41-01:

1. The Presumpscot Street Intermodal Facility site plan is in conformance with the Site Plan Ordinance of the Land Use Code.

   potential condition of approval:

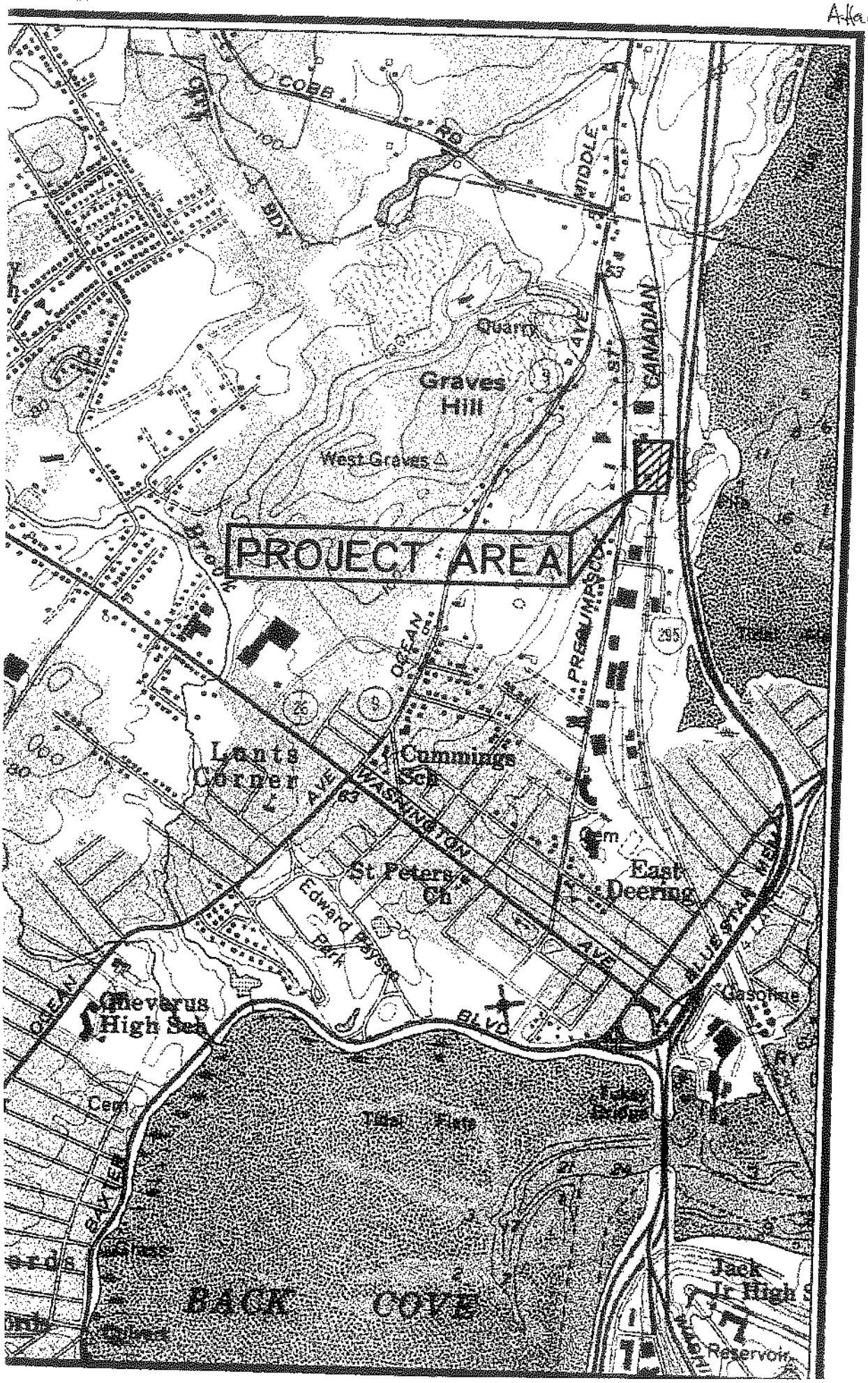
   That an executed drainage maintenance agreement for the Vortechnics unit be provided by the applicant and approved by Corporation Counsel, prior to commencement of site work.

2. The Presumpscot Street Intermodal Facility site plan is in conformance with Chapters 500 and 502 of the Maine DEP Regulations

Attachments

1. Vicinity Map
2. Project Narrative
3. Stormwater Report
4. Subsurface Conditions Report
5. Traffic Study
6. Financial Capacity
7. Staff Comments
   a. Public Works
   b. Reviewing Engineer
   c. Traffic Engineer
8. Site Plans/Building Elevations

Attachment 1



Attachment 2

# 383 PRESUMPSCOT STREET
# APPLICATION FOR SITE PLAN APPROVAL
# BY OCTOBER CORPORATION

The October Corporation, P.O. Box 17516, Portland, Maine 04112-8516, is requesting site plan approval for the development of a intermodal transfer facility on the property it owns at 383 Presumpscot Street in Portland, Maine. The October Corporation (a wholly owned subsidiary of the Libra Foundation) is currently developing an office park in New Gloucester and owns several office buildings in downtown Portland. The proposed facility will provide an opportunity to utilize a mass transportation system for the commuter traffic associated with the Corporation's projects. October Corporation is currently investigating arrangements with area bussing firms. The parcel's location adjacent to the St. Lawrence railroad would also provide an opportunity for commuter rail service in the future.

The subject parcel is approximately 4.08 acres in size, with 650 feet of frontage on Presumpscot Street. The rear of the property borders the St. Lawrence railroad property. The site has historically been used by various contracting firms. The site is gently sloping towards the rear of the property and towards the southern boundary. A ravine, which carries stormwater from this section of Presumpscot Street to the ocean, is located on the south side of the property.

The site plan depicts the potential for a future build-out of the property. Initially, a 109-space parking lot would be constructed, along with a bus drop-off and loading area. The existing driveway entrance to the site would serve as one entrance to the parking lot, and a second entrance would be created approximately 250 feet south of the existing entrance. If the demand exists, an additional 72 spaces can be added on the north side of the parking facility. The site plan also depicts a commuter station of 1250 square feet, consisting of a small waiting room, a ticket booth, and a rest room. The station would be constructed once the facility's demand is established.

Power and telephone service exist on overhead poles along Presumpscot Street. Underground conduits for these services will be brought onto the site during the construction of the first phase of the parking lot. The Portland Water District has a 10-inch main within the Presumpscot Street

right-of-way and currently has a service on-site. The wastewater generated from the facility is estimated to be approximately 550 gallons per day. The public sewer is located approximately 400 feet south of the parcel and as a result of the grades on Presumpscot Street, the sewer main cannot be extended to serve the site. An on-site subsurface wastewater disposal system will be utilized to serve the future commuter station. The location of the system is shown on the site plan and a HHE-200 form is included with this application. Solid waste generated at the site will be minimal, a cleaning service will dispose of this at the end of each business day.

The proposed project will not exceed the threshold of creating three acres of impervious area and thus will not require a Maine Department of Environmental Protection (MDEP) Site Location Permit. The only wetlands that exist on the site are located within the ravine along the southern property line. There are no wetlands being impacted by the proposed project.

Over the years, the site has been filled and graded and thus there are no unusual natural areas, wildlife or fisheries habitats on the site. The soils are mapped as a Buxton silty loam. Test pits were excavated on the site to determine the depth of fill placed on the site. The test pit locations are shown on the site plan and a copy of the test pit logs are included with this application. The soils are suitable for the proposed project. Temporary and permanent erosion control measures are included on the plans.

The stormwater discharge from the site will be collected by catch basins and transported via the storm drainpipes to Vortech's Model 7000 for sediment removal prior to discharge to the ravine located along the southern property boundary.

In accordance with the submittal requirements included with the Site Plan, are elevations of the future building, a landscaping plan, a lighting plan a boundary survey, a storm water management plan, copies of the deeds and a copy of the Libra Foundation statement of Financial Position 2000.

# CITY OF PORTLAND, MAINE
## SITE PLAN CHECKLIST

Intermodal Transfer Facility 393 Presumpscott St
Project Name, Address of Project

I.d. Number

| Submitted () & Date | Item | Required Information | Section 14-525 (b,c) |
|---|---|---|---|
| 6/26/01 | (1) | Standard boundary survey (stamped by a registered surveyor, at a scale of not less than 1 inch to 100 feet and including: | 1 |
| 6/26/01 | (2) | Name and address of applicant and name of proposed development | a |
| 6/26/01 | (3) | Scale and north points | b |
| 6/26/01 | (4) | Boundaries of the site | c |
| 6/26/01 | (5) | Total land area of site | d |
| 6/26/01 | (6) | Topography - existing and proposed (2 feet intervals or less) | e |
| | (7) | Plans based on the boundary survey including: | 2 |
| 6/26/01 | (8) | Existing soil conditions | a |
| 6/26/01 | (9) | Location of water courses, marshes, rock outcroppings and wooded areas | b |
| 6/26/01 | (10) | Location, ground floor area and grade elevations of building and other structures existing and proposed, elevation drawings of exterior facades, and materials to be used | c |
| 6/26/01 | (11) | Approximate location of buildings or other structures on parcels abutting the site | d |
| 6/26/01 | (12) | Location of on-site waste receptacles | e |
| 6/26/01 | (13) | Public utilities | e |
| 6/26/01 | (14) | Water and sewer mains | e |
| 6/26/01 | (15) | Culverts, drains, existing and proposed, showing size and directions of flows | e |
| 6/26/01 | (16) | Location and dimensions, and ownership of easements, public or private rights-of-way, both existing and proposed | f |
| 6/26/01 | (17) | Location and dimensions of on-site pedestrian and vehicular accessways | g |
| 6/26/01 | (18) | Parking areas | g |
| 6/26/01 | (19) | Loading facilities | g |
| 6/26/01 | (20) | Design of ingress and egress of vehicles to and from the site onto public streets | g |
| 6/26/01 | (21) | Curb and sidewalks | g |
| 6/26/01 | (22) | Landscape plan showing: | h |
| 6/26/01 | (23) | Location of existing proposed vegetation | h |
| 6/26/01 | (24) | Type of vegetation | h |
| 6/26/01 | (25) | Quantity of plantings | h |
| 6/26/01 | (26) | Size of proposed landscaping | h |
| 6/26/01 | (27) | Existing areas to be preserved | h |
| 6/26/01 | (28) | Preservation measures to be employed | h |
| 6/26/01 | (29) | Details of planting and preservation specifications | h |
| N/A | (30) | Location and dimensions of all fencing and screening | i |
| location 6/26/01 | (31) | Location and intensity of outdoor lighting system | j |
| | (32) | Location of fire hydrants, existing and proposed | k |
| 6/26/01 | (33) | Written statement | c |
| 6/26/01 | (34) | Description of proposed uses to be located on site | l |
| 6/26/01 | (35) | Quantity and type of residential, if any | l |
| 6/26/01 | (36) | Total land area of the site | b2 |
| 6/26/01 | (37) | Total floor area and ground coverage of each proposed building and structure | b2 |
| | (38) | General summery of existing and proposed easements or other burdens | c3 |
| 6/26/01 | (39) | Method of handling solid waste disposal | 4 |

| | | | |
|---|---|---|---|
| 6/26/01 | (40) | Applicant's evaluation of availability of off-site public facilities, including sewer, water and streets | 5 |
| 6/26/01 | (41) | Description of any problems of drainage or topography, or a representation that there are none | 6 |
| | (42) | An estimate of the time period required for completion of the development | 7 |
| 6/26/01 | (43) | A list of all state and federal regulatory approvals to which the development may be subject | 8 |
| N/A | (44) | The status of any pending applications | 8 |
| N/A | (45) | Anticipated timeframe for obtaining such permits | h8 |
| N/A | (46) | A letter of non jurisdiction | h8 |
| 6/26/01 | (47) | Evidence of financial and technical capability to undertake and complete the development including a letter from a responsible financial institution stating that is has reviewed the planned development and would seriously consider financing it when approved. | |

Note: Depending on the size and scope of the proposed development, the Planning Board or Planning Authority may request additional information, including (but not limited to):

- drainage patterns and facilities;
- erosion and sedimentation controls to be used during construction;
- a parking and/or traffic study;
- a noise study;
- an environmental impact study;
- a sun shadow study;
- a study of particulates and any other noxious emissions; and
- a wind impact analysis.

Other comments:

Attachment 3

# STORMWATER MANAGEMENT PLAN
# 383 PRESUMPSCOT STREET
# PORTLAND, MAINE

## A. INTRODUCTION

This stormwater management plan for proposed development of a transportation intermodel facility at 383 Presumpscot Street in Portland, Maine was designed to comply with the Maine Department of Environmental Protection (MDEP) Rules for stormwater quantity as outlined in 06-096 CMP, Chapter 500.3 Stormwater Management and using three general objectives of MDEP's Stormwater Management for Maine Best Management Practices (MDEP BMP)(MDEP, 1995):

1. effective drainage
2. flood prevention
3. erosion control

As designed, peak runoff rates for post-development conditions at the site will be less than those from the pre-development conditions.

The pre- and post-development surface water peak runoff rates were evaluated for the watershed in which the intermodel facility development is included. Stormwater flows were calculated for 2-, 10-, and 25-year/24-hour storm events with Type III Soil Conservation Service rainfall distribution and Type 2 antecedent moisture conditions, using HydroCAD computer modeling system by Applied Microcomputer Systems of Chocorua, New Hampshire.

## B. PROJECT DESCRIPTION

The October Corporation (a wholly owned subsidiary of the Libra Foundation) of Portland, Maine owns a parcel of land at 383 Presumpscot Street in Portland, Maine. The subject parcel is approximately 4.1 acres. The rear of the property borders the St. Lawrence and Atlantic Railroad property. Various contracting firms have historically used the site. The site slopes gently to the

rear of the property and toward a ravine that carries storm water located at the south end of the property. The property is currently vacant and there are two garages remaining on the site.

Proposed site development includes construction of a 171-space parking lot and a 3000 square foot building.

The total existing impervious area within the site is approximately 0.5 acres in pre-development. The intermodel facility project will result in an impervious area of approximately 1.57 acres.

## C. SITE WATERSHEDS

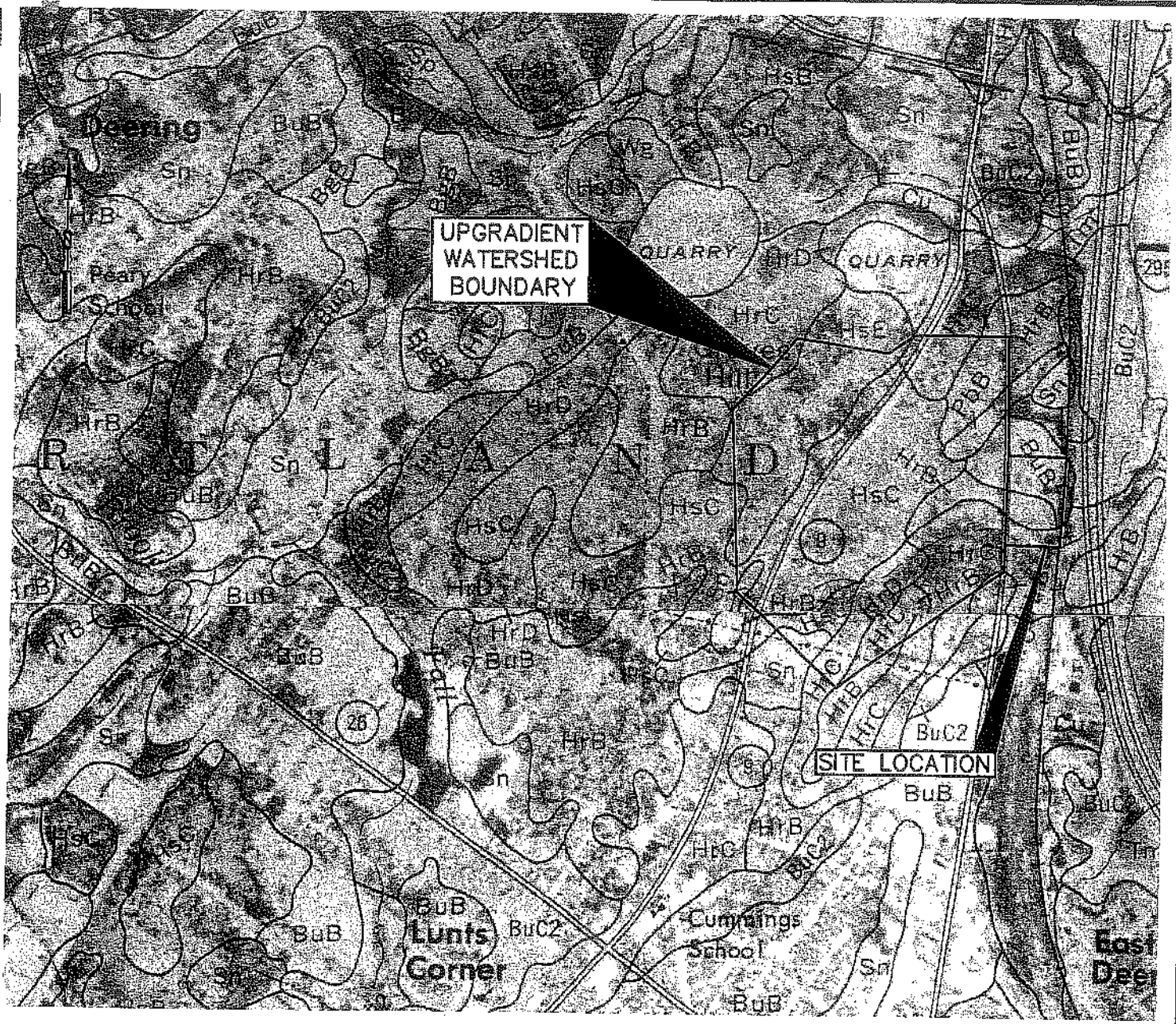
The proposed intermodel facility site is situated in the Casco Bay Watershed. The intermodel facility watershed drains to small-unnamed tributaries, which flow eastward approximately 500 feet to their confluence with Casco Bay.

Surficial soils in the watersheds were mapped by the SCS as Paxton, Hollis, and Buxton series soils. For stormwater modeling purposes these soils were modeled as hydrologic soil group (HSG) C soils (see Figure 1).

An upgradient watershed conveys water to the ravine on the south side of the intermodel facility property. This upgradient watershed is located on the west side of Presumpscot Street and extends to the top of Graves Hill as shown on Figure 2. Pre- and post-development conditions for the intermodel facility site are shown on Drawings D-100 and D-101.

### Intermodel Facility Watershed Stormwater Flows

The study area for the intermodel facility watershed consists of approximately 67.5 acres in pre-development and post-development conditions as indicated on Figure 2 and Drawings D-100 and D-101. The area of study consists of two points of analysis for storm water flows.




| MAP DESIGNATION | NAME | HYDROLOGIC SOIL GROUP |
|---|---|---|
| BuB | BUXTON, SILT LOAM | C |
| BuC2 | BUXTON, SILT LOAM | C |
| HrB | HOLLIS, FINE SANDY LOAM | C |
| HrC | HOLLIS, FINE SANDY LOAM | C |
| HsC | HOLLIS, VERY ROCKY FINE SANDY LOAM | C |
| HsE | HOLLIS, VERY ROCKY FINE SANDY LOAM | C |
| PbB | PAXTON, FINE SANDY LOAM | C |

REFERENCE: SOIL SURVEY OF CUMBERLAND COUNTY, MAINE BY U.S. DEPT. OF AGRICULTURE, AUGUST 1974. MAPS 76 & 82.

FIGURE 1
MEDIUM INTENSITY SOILS MAP
OCTOBER CORPORATION
INTERMODAL TRANSPORTATION FACILITY
PRESUMPSCOT STREET
PORTLAND, MAINE

500 0 1000 2000 FEET

DWG: SOILS LMN: REV: 6/21/01

SME
Sevee & Maher Engineers, Inc.

are shown in Drawing D-100. The catchment boundaries and $T_c$ routing for post-development site conditions are shown in Drawing D-101.

TABLE 1

SUMMARY OF STORMWATER ROUTING CONDITIONS
PRESUMPSCOT STATION

PRE-DEVELOPMENT

| Analysis Point | Catchment Area | Area (acres) | $C_N$ (weighted) | $T_c$* (min) | Peak Flow** (cfs) (2/10/25-yr storm) |
|---|---|---|---|---|---|
| 1 | 1 | 1.69 | 85 | 16.6 | 2.2/4.3/5.3 |
| 2 | 2 | 3.24 | 86 | 25.2 | 46.2/108.8/140.8 |
| | 217 | 8.32 | 72 | 23.9 | |
| | 218 | 9.46 | 71 | 23.9 | |
| | 219 | 44.8 | 78 | 19.6 | |

POST-DEVELOPMENT

| Analysis Point | Catchment Area | Area (acres) | $C_N$ (weighted) | $T_c$* (min) | Peak Flow** (cfs) (2/10/25-yr storm) |
|---|---|---|---|---|---|
| 1 | 1 | 1.05 | 75 | 16.5 | 0.80/1.90/2.51 |
| 2 | 201-219 | See HydroCAD Data | See HydroCAD Data | See HydroCAD Data | 45.4/107.6/139.4 |

Notes

* $T_c$ is to subcatchment downgradient boundary or detention pond, as applicable.
** Peak flow of analysis point after routing through detention ponds and/or reaches.

As indicated in Table 1, the post-development peak rates of runoff at analysis points 1 and 2 are less than those of pre-development conditions. The decrease in SC-1 peak flow rates is accomplished by decreasing the area of SC-1 in post-development conditions. The decrease in SC-2 peak flow rates is due to allowing peak flows from the site to leave the watershed prior to the peak flows from the upgradient watershed.

## D. PROPOSED DRAINAGE FACILITIES

Surface water at the site will be collected in catch basins, conveyed via the storm drain pipes to a vortex for sediment removal prior to discharge to the ravine located along the southern property border. Locations of catch basins, piping, and the vortex system are shown on Drawing D-101. Catch Basins will consist of 4-foot diameter pre-cast concrete structures. Storm drains will consist of 12, 15, and 18-inch diameter PVC Pipe. The piping system was sized to handle projected flows during the 24-hour/25-year rainfall event. Pipes were also sized to allow from a minimum flow rate of 3.0 feet/second during a 2-year storm event to limit the buildup of grit and sediment in the piping. A Vortechnics Model 7000 storm water treatment system will be installed to provide removal of grit and suspended solids from storm water prior to discharge to the stream in the ravine.

The design capacity of stormwater drainage structures was based on SCS TR-20 methodology. Pipes were sized using the HydroCAD. Results of pipe sizing are indicated on HydroCAD printouts in Appendix B. Water quality worksheets are contained in Appendix C.

Attachment 4

SME

Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants

April 10, 2001

00015.05
010409pu.doc

Mr. Paul Ureneck
Boulos Property Management
One Canal Plaza
Portland ME 04101

Subject: Subsurface Conditions, 373 Presumpscot Street Property
Portland, Maine

Dear Paul:

The purpose of this letter is to describe the subsurface conditions encountered in test pits made at the 373 Presumpscot Street Property (i.e., site) on April 6, 2001. Test pits were made to evaluate fill thickness and presence/nonpresence of granular materials suitable for parking lot construction. A total of 20 test pits were excavated using a backhoe supplied by White Bros. Construction of Westbrook, Maine. The test pits were identified as test pits TP-101 through TP-120. The approximate locations of the test pits with respect to the site property boundaries and existing site structures are shown on Figure 1.

The site is generally flat and has two wood frame buildings located along its back (east) side. The south side of the site is filled land as evidenced by abrupt changes in topography and vegetation. The back of the property is paralleled by the Canadian National Railway. The front (west) side of the property is paralleled by Presumpscot Street. The north and south sides of the property are abutted by private ownership.

The native soils encountered at the site consisted of brown and gray silty clays. Where the native silty clays were observed, they were estimated to be medium to stiff in terms of consistency. At several site locations the native silty clay was overlain by clayey fill soil mixed with wood, masonry, pavement, and other debris. Groundwater, in the form of seepage along the test pit sidewalls, was observed within the fill materials. At test pit locations TP-102 and TP-103 a slight oily odor was detected along with oil sheen presence on the test pit seepage. The test pit depths varied from approximately 2 to 8 feet. The deeper test pits generally exhibited the greatest thickness of fill. Essentially, no granular materials suitable for parking lot construction were encountered in the test pits. Table 1 summarizes the soil conditions encountered in the test pits. Excavation of each test pit was typically halted once native soils were encountered in effort to minimize disturbance of the foundation soils for future parking lot construction. Upon completion,



4 Blanchard Road P.O. Box 85A Cumberland Center, ME 04021 (207) 829-5016 FAX (207) 829-5692 www.smemaine.com

each test pit was backfilled in layers and tamped with the backhoe bucket to obtain compaction.

TABLE 1

| Test Pit | Fill Thickness (feet) | Fill Description |
|---|---|---|
| TP-101 | 3.5 | Soft brown clayey soil intermixed with pavement, cinders and ash |
| TP-102 | 6+ | Soft clayey soil intermixed with concrete, wood and rubble |
| TP-103 | 5+ | Soft clayey soil with many cobbles and small boulders, heavy seepage |
| TP-104 | 0 | No fill observed (stiff native silty clay) |
| TP-105 | 1 | Soft brown silty soil |
| TP-106 | NA | Pipe trench with pipe buried 18 inches below ground surface and stone backfill |
| TP-107 | 0.5 | Soft brown clayey soil intermixed with sand and gravel |
| TP-108 | 3+ | Soft clayey soil mixed with rubble and large fragments of concrete |
| TP-109 | 3 | Soft clayey soil intermixed with rubble |
| TP-110 | 0.5 | Sand and gravel intermixed with clayey soil |
| TP-111 | 0.5 | Sand and gravel intermixed with clayey soil |
| TP-112 | 1 | Soft clayey soil and buried wooden log |
| TP-113 | 0 | No fill observed (stiff native silty clay) |
| TP-114 | 2 | Soft clayey soil |
| TP-115 | 4.5 | Soft clayey soil intermixed with wood debris |
| TP-116 | 6 | Soft clayey soil intermixed with wood debris |
| TP-117 | 2.5 | Edge of leachfield, 18 inches sand over 12+ inches stone |
| TP-118 | 1 | Leachfield distribution box, buried below 12 inches stone |
| TP-119 | 0.5 | Concrete septic tank |
| TP-120 | 1 | Soft clayey soil |

Three buried drainage features were encountered as part of the test pit activities.

1. A leachfield (approximately 18 inches of sand over 12+ inches of stone) and a concrete septic tank (estimated 750 to 1,000 gallons) were encountered adjacent to the east side of the larger of the two site buildings. The approximate location of the tank and leachfield are shown on Figure 1. A concrete distribution box was encountered separating the leachfield and tank. The distribution box was left marked in the field by three concrete blocks. No visible damage was sustained by the leachfield, distribution box, septic tank, or associated piping as result of the test pitting activities. A small portion of the leachfield (north end) was excavated and no pipes were encountered in that area.

2. A catch basin was identified on the front (west) side of the larger site building. An 8- to 10-inch outlet pipe was observed running approximately south from the catch basin at a depth of about 2 feet. The

CURTIS WALTER STEWART
Architects

434 Cumberland Avenue
Portland ME 04101-2325

Benedict B. Walter, Vice President
Phone: 207.774.4441
Fax: 207.774.4016
E-mail: BWalter@CWSarch.com

September 6, 2001

Sarah Hopkins
Senior Planner
Department of Planning and Urban Development
389 Congress Street
Portland ME 04101

Re: Presumpscot Street Intermodal Facility
Site Lighting Design Summary

Dear Sarah,

The site lighting design for the above referenced project was based on the City of Portland Lighting Standards, specifically as follows:

4. SPECIFIC STANDARDS

A. **Uniformity**: Some portions of the site are not lighted and have virtually no foot candles of light level. Of the site area to be lighted, the lowest light level is 0.35 fc and the highest is 1.70 fc. This equates to a uniformity ratio of approximately 5 to 1, well below the maximum ratio of 20 to 1.
B. **Minimum**: 0.35 fc (at area of the site to be illuminated)
**Maximum**: 1.70 fc
**Average**: 1.15 (Approximate)
C. **Fixture Height**: 18' above finish grade
D. **Light Trespass**: The site lights are full cut-off luminaires which will allow virtually no light trespass in excess of 0.1 fc with the exception of one small area facing Presumpscot Street. This area, however, is also illuminated by street lighting and thus no negative impact will be realized. This will not cause glare to passing drivers.
E. **Wattage**: 250 Watt bulbs
F. **Light Quality**: Metal Halide

In summary, we believe this site lighting scheme meets and exceeds the intent of the Lighting Standards of the City of Portland.

Very truly yours,

CURTIS WALTER STEWART ARCHITECTS

Benedict B. Walter, Architect
Vice President

**From:** Anthony Lombardo
**To:** Sarah Hopkins
**Date:** Fri, Jul 6, 2001 1:05 PM
**Subject:** 383 Presumpscot St....Intermodal Transportation Facility

I have reivewed the application and plans dated 6/26/01 and offer the following comments:

1. The applicant needs to contact Carol Merritt of Public Works regarding the potential costs associated with a Street Opening Permit (required with any work within the public right of way). This section of road may have been paved within the last 5 years, as a result, additional fees may be required.
2. The applicant needs to provide a paved sidewalk, at least 5 feet wide, and an esplanade along the frontage of the property.

**From:** Larry Ash
**To:** Sarah Hopkins
**Date:** Thu, Sep 6, 2001 5:49 AM
**Subject:** Intermodal Transfer Facility on Presumpscot Street

Sarah: I have reviewed the traffic report on the proposed Intermodal Transfer Facitlity and have no traffic related issues.

outlet pipe apparently turns southeast at some distance from the catch basin to discharge near the edge of the eastern property boundary. The approximate location of the catch basin and outlet pipe are shown on Figure 1.

3. A buried concrete tank was observed adjacent to the front of the building. Based on inspection of the tank interior (through the tank accessway), several pipes connect to the tank which appeared to enter the tank from direction(s) parallel to the west wall of the building.

Thank you for allowing Sevee & Maher Engineers, Inc. to assist you in understanding the subsurface conditions at the 373 Presumpscot Street Property. If we can be of any further assistance, or if we can clarify any of the information presented herein, please do not hesitate to contact us.

Respectfully,

SEVEE & MAHER ENGINEERS, INC.

Matthew W. Muzzy, P.E.
Geo-Environmental Engineer

cc: Robert Arsenault (SME)

Attachment 5

SME

Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants

August 14, 2001

00013.07
010813la.doc

City of Portland
Attn: Mr. Larry Ash
Traffic Engineering Division
65 Hanover Street
Portland, ME 04101

Portland, Maine

Subject: October Corp.
Intermodal Transfer Facility
Traffic Study

Dear Mr. Ash:

In response to our telephone conversation of June 28, 2001 concerning October Corporation's proposed intermodal transfer facility on Presumpscot Street, we offer the following information for your review:

1. Sight distance at the project entrances:

Sevee & Maher Engineers, Inc. (SME) has measured the available sight distance at each proposed entrance. Sight distance was measured at a point 10 feet from the edge of travelway to the centerline of the opposing lane(s), assuming a height of eye of 3.5 feet and a height of object of 4.25 feet. The available sight distance from each entrance is as follows:

| | Available Site Distance | |
|---|---|---|
| | Left | Right |
| North Entrance/Exit | >750' | >950' |
| South Entrance/Exit | 530' | >1200' |

The measured sight distance exceeds the City's sight distance standard of 513 feet for a posted speed limit of 35 mph, as specified in Section III, paragraph 4, Traffic Design Standards and Guidelines of the "City of Portland, Maine Technical and Design Standards and Guidelines," March 2000.



4 Blanchard Road P.O. Box 85A Cumberland Center, ME 04021 (207) 829-5016 FAX (207) 829-5692 www.smemaine.com

2. Impact on Intersection Capacity of Washington Avenue and Presumpscot Street:

SME conducted turning movement counts at Washington Avenue and Presumpscot Street from 6:00 AM to 9:00 AM, and from 3:00 PM to 6:00 PM on Tuesday, July 10, 2001. Because of late afternoon thunderstorms which caused numerous accidents and traffic delays, the afternoon count was repeated from 4:00 PM to 6:00 PM on Wednesday, July 18, 2001. Traffic generation from the project site was based on rates outlined in the 6th Edition of "ITE Trip Generation", Land Use 090; Park and Ride Lot with Bus Shuttle. It is expected that this facility (171 parking spaces) will generate 113 PM peak hour trips, and 109 AM peak hour trips. Based on the traffic distributions at Washington Avenue and studies conducted for the Pineland Center in New Gloucester, it was assumed that 15 new trips would be generated from/to Washington Avenue, 17 new trips would result on Presumpscot Street from Falmouth, with the remainder of the trips diverted from existing traffic on Washington Avenue.

Peak hour volumes were increased by 2 percent to account for traffic growth from 2001 to 2002. The morning and afternoon peak hour performance for 2002 was calculated for both the "Build" and "No-build" 2002 conditions. It was found that no significant degradation in the intersection's level of service will result from this project. The intersection will continue to operate at a Level of Service (LOS) B (AM) and C (PM). Performance charts, assumptions, and analyses are attached.

The traffic analysis was prepared through the combined efforts of Sevee & Maher Engineers, Inc. and HNTB of Westbrook, Maine. SME conducted turning movement counts, compiled intersection configuration data and performed the traffic generation and distribution analysis. HNTB reviewed the information compiled by SME and provided the peak hour performance analysis.

3. Presumpscot Street Truck Traffic:

Based on the turning movement counts, existing truck traffic on Presumpscot Street is as follows:

| | No. Trucks | % of Total Traffic |
|---|---|---|
| AM (6-9) | 101 | 9.4 |
| PM (4-6) | 43 | 6.1 |

Enclosed is a copy of site plans for Phase I of the project.

If you have any questions or require additional information, please contact me.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

John R. Kennedy, P.E.

Enclosures

SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine

# TELEPHONE MEMORANDUM

Job No. 00013.07

DATE: June 28, 2001

BETWEEN: Larry Ash, city of Portland Traffic Engineer

AND: John Kennedy, SME

SUBJECT: PRESUMPSCOT STREET – TRAFFIC IMPACTS

---

Explained to Larry that October Corporation had submitted a site plan application for an intramodal transfer facility on Presumpscot Street. Use to be for car/bus transfer of October Corporation/Boulos Properties employees to work in downtown Portland. Also, use for rail transportation for commuters from Portland, South Portland, and Cape Elizabeth to work in Pineland, New Gloucester. At this time, majority of usage would be bussing of commuter traffic to downtown.

Larry's Concerns.

1. Sight distance of project entrance (SME believes OK on this).

2. Ability of Presumpscot Street/Washington Avenue to handle additional traffic and/or change in turning movement. May be a simple matter of striping and modification of signal timing. Current Washington Avenue traffic is 20,000 vehicles per day. Recommends that a local traffic engineer review the intersection impact.

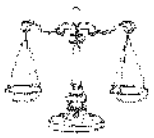
3. Also, elementary school is located on Presumpscot Street. However, there are crossing guides on Washington and Presumpscot Street.

4. Large number of trucks on Presumpscot Street.

5. Neighborhood is well organized.



4 Blanchard Road P.O. Box 85A Cumberland Center, ME 04021 (207)829-5016 FAX (207)829-5692



## Statement of Financial Position 2000

Year Ended December 31, 2000

ASSETS

| | | |
|---|---|---|
| Investments, at market | | $ 54,163,218 |
| Cash and cash equivalents | | 100,451 |
| Beneficial interest in trust | | 157,558,327 |
| Federal excise tax receivable | | 54,528 |
| Program-related investments | | 8,456,063 |
| Assets held in title-holding corporation | | 73,735,541 |
| Property and equipment, net of accumulated depreciation of $83,955 at December 31, 2000 | | 309,902 |
| Other assets | | 135,752 |
| | TOTAL ASSETS | $294,515,782 |

LIABILITIES

| | | |
|---|---|---|
| Payables and other liabilities | | $ 26,460 |
| Deferred federal excise tax | | 118,000 |
| | TOTAL LIABILITIES | 144,460 |

NET ASSETS

| | | |
|---|---|---|
| Unrestricted net assets | | 294,371,322 |
| | TOTAL LIABILITIES AND NET ASSETS | $ 294,515,782 |

Arts, Culture & Humanities | Education | Environment | Health | Human Services | Other | Public/Society Benefit | | Activities 2000 | Allocation Across Fields

7a

**From:** Anthony Lombardo
**To:** Sarah Hopkins
**Date:** Fri, Jul 6, 2001 1:05 PM
**Subject:** 383 Presumpscot St....Intermodal Transportation Facility

I have reivewed the application and plans dated 6/26/01 and offer the following comments:

1. The applicant needs to contact Carol Merritt of Public Works regarding the potential costs associated with a Street Opening Permit (required with any work within the public right of way). This section of road may have been paved within the last 5 years, as a result, additional fees may be required.
2. The applicant needs to provide a paved sidewalk, at least 5 feet wide, and an esplanade along the frontage of the property.

7c

**From:** Larry Ash
**To:** Sarah Hopkins
**Date:** Thu, Sep 6, 2001 5:49 AM
**Subject:** Intermodal Transfer Facility on Presumpscot Street

Sarah: I have reviewed the traffic report on the proposed Intermodal Transfer Facitlity and have no traffic related issues.

7b

# MEMORANDUM

**DATE:** **September 5, 2001**

**TO:** **Sarah Hopkins, Senior Planner**

**FROM:** Stephen R. Bushey, P.E.

**SUBJECT:** **Intermodal Transfer Facility**

---

I have reviewed the materials dated 8/17/01 for the above project and find that they are in substantial conformance with the City's rules and regulations. The project is subject to the provisions of 38 M.R.S.A. Section 420-D and Chapters 500 and 502 of the MEDEP Regulations. Pursuant to the City of Portland's Delegated review authority the following Findings of Facts is made:

Stormwater Quantity Standards:

The stormwater quantity plan submitted by the applicant has been reviewed by the City staff and the findings are as follows:

A. Peak flow from the site and peak flow of Receiving waters:
The applicant has proposed a closed stormwater collection systems that, based on the estimates or pre and post development stormwater runoff flows obtained by using the SCS TR-20 methodology, results in post development flows being at or below pre-development levels from the site as well as in the receiving waters below.

B. Maintenance:
All components of the stormwater collection system will be maintained by the applicant in compliance with State and Local Standards.

C. Discharge to Freshwater Wetlands:
Freshwater wetlands will receive stormwater in the same manner as before the development

Stormwater Quality Standards:

The proposed project includes the installation of a Vortechnics Model 7000 stormwater treatment system to remove grit and suspended solids from stormwater prior to discharge to the stream on the ravine. The installation of these measures will meet the requirements of the State and local standards for the treatment of stormwater runoff.

Based on these findings the City of Portland concludes the pursuant to 38 M.S.R.A Section 420-D and chapters 500 and 502 of the MEDEP regulations and The City's Technical Standards:

A. The applicant has made adequate provision to ensure that the development will meet the stromwater quantity and quality standards for : (1) Peak flow from the site and the receiving water; (2) Maintenance; and (3) Discharge to freshwater wetlands.

Therefore, I recommend the project be presented to the Portland Planning Board for approval, assuming no other issues from Staff or the Board.

If you have any questions please call.

10|2|01

TO: SARAH HOPKINS 756-8258

FROM: KIM FARRAR, BOULOS

Thank you so much for your help in expediting this! I'll wait to hear from you on the amt. needed for the perf. guarantee + the inspection fee.

Kim 871-1290
653-8528

Department of Planning and Urban Development

## SUBDIVISION/SITE DEVELOPMENT

## COST ESTIMATE OF IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

Date: _____

Name of Project: Inter-Modal Transfer Facility - Phase I

Address/Location: Presumpscot

Developer: October Corporation

Form of Performance Guarantee: _____

Type of Development: Subdivision _____ Site Plan (Major/Minor) _____

TO BE FILLED OUT BY THE APPLICANT:

| Item | PUBLIC Quantity | Unit Cost | Subtotal | PRIVATE Quantity | Unit Cost | Subtotal |
|---|---|---|---|---|---|---|
| 1. STREET/SIDEWALK | | | | | | |
| Road | N/A | N/A | N/A | N/A | N/A | N/A |
| Granite Curbing | 560 LF | 22.00 | 12,320.00 | 296 LF | 22.00 | 6512.00 |
| Sidewalks | 311 SY | 15.65 | 4867.15 | 15 SY | 15.65 | 234.75 |
| Esplanades | 490 S.F. | 2.95 | 1446.00 | N/A | N/A | N/A |
| Monuments | N/A | N/A | N/A | N/A | N/A | N/A |
| Street Lighting | N/A | N/A | N/A | N/A | N/A | N/A |
| Street Opening Repairs | 183 SY | 40.00 | 7320.00 | N/A | N/A | N/A |
| Other | N/A | N/A | N/A | N/A | N/A | N/A |
| 2. EARTH WORK | | | | | | |
| Cut | N/A | N/A | N/A | 2450 CY | 6.00 | 14,700.00 |
| Fill | N/A | N/A | N/A | 2300 CY | 7.75 | 17,825.00 |
| 3. SANITARY SEWER | Note: Sewer Work in Phase II | | | | | |
| Manholes | | | | | | |
| Piping | | | | | | |
| Connections | | | | | | |
| Main Line Piping | | | | | | |
| House Sewer Service Piping | | | | | | |
| Pump Stations | | | | | | |
| Other | | | | | | |
| 4. WATER MAINS | N/A | N/A | N/A | 250 LF | 25.00 | 6250.00 |
| 5. STORM DRAINAGE | | | | | | |
| Manholes | N/A | N/A | N/A | N/A | N/A | N/A |
| Catchbasins | 1 EA | 2350.00 | 2350.00 | 15 EA | 2350.00 | 35250.00 |
| Piping | 20 LF | 31.00 | 620.00 | 870 LF | 32.00 | 27,840.00 |
| Detention Basin | | | | N/A | N/A | N/A |
| Stormwater Quality Units | | | | 1 EA | 35000.00 | 35,000.00 |
| Other Rip-Rap | | | | 65 CY | 45.00 | 2,925.00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6. SITE LIGHTING | N/A | N/A | N/A | 10 EA | 2,730.00 | 27300.00 |
| 7. EROSION CONTROL | | | | | | |
| Silt Fence | 150 LF | 3.00 | 450.00 | 670 LF | 3.00 | 2,010.00 |
| Check Dams | N/A | | | 6 CY | 40.00 | 240.00 |
| Ripe Inlet/Outlet Protection | N/A | | | N/A | | |
| Level Lip Spreader | N/A | | | N/A | | |
| Slope Stabilization | N/A | | | N/A | | |
| Geotextile | N/A | | | N/A | | |
| Hay Bale Barriers | N/A | | | N/A | | |
| Catch Basin Inlet Protection | N/A | | | 15 EA | 90.00 | 1,350.00 |
| 8. RECREATION AND OPEN SPACE AMENITIES | ? | | | N/A | | |
| 9. LANDSCAPING (Attach breakdown of plant materials, quantities, and unit costs) SEE ATTACHMENT #1 | | | 2,086.00 | | | 20,139.00 |
| 10. MISCELLANEOUS SEE ATTACHMENT #2 | | | 2,120.00 | | | 101,011.00 |
| TOTAL: | | | 33,549.65 | | | 301,663.90 |
| GRAND TOTAL: | | | | | | $335,213.55 |

**INSPECTION FEE** (to be filled out by the City)

| | | PUBLIC | PRIVATE | TOTAL |
|---|---|---|---|---|
| A: | 2.0% of totals: | 670.99 | 6,024.27 | 6,695.26 |
| | or | | | |
| B: | Alternative Assessment: | | | |
| | Assessed by: | J.R. (name) | (name) | |

# Attachment #1

| Key | Quantity | Botanical Name | Common Name | Size | Condition |
|---|---|---|---|---|---|
| A | 29 | Gleditsia Triacanthos Inermis | Sunburst Thornless, Honey Locust | 3" cal. | - |
| B | 15 | Q. Palustris | Pin Oak | 2 1/2 - 3" cal. | - |
| C | 17 | Pyrus Calleryana "Bradford" | Bradford Callery Pear | 2 1/2 - 3" cal. | - |
| D | 9 | Malus Snow Drift | Flowering Crab | 2 1/2" cal. | - |
| E | 8 | Syringa Vulgaris | Common Lilac | 6' ht. | - |
| F | 15 | J. Chinensis Pfitzeriana | Chinese Juniper | 3' spr. | - |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Notes:

1. Existing trees to remain prior to clearing. Contractor shall request architect to walk site to approve trees to be removed.
2. 4" loam & seed all disturbed areas, bark mulch at planting beds.

| | Public | | | Private | | |
|---|---|---|---|---|---|---|
| | qty | Unit cost | total | qty | Unit cost | total |
| trees | 7 | 298.00 | 2,086.00 | 63 | 298.00 | 18,744.00 |
| Lilac | | | | 3 | 215.00 | 645.00 |
| Juniper | | | | 15 | 50.00 | 750.00 |

## Attachment #2

| | PUBLIC | | | PRIVATE | | |
|---|---|---|---|---|---|---|
| *Item* | *Quantity* | *Unit Cost* | *Subtotal* | *Quantity* | *Unit Cost* | *Subtotal* |
| Clearing | N/A | | | 1 L.S. | $1,000.00 | $1,000.00 |
| Stumping | N/A | | | 35 c.y.s. | $15.00 | $525.00 |
| Sub-base gravel for Parking & Roadways | 70 c.y.s. | $11.75 | $822.50 | 2650 c.y.s | $11.75 | $31,137.50 |
| Base Gravel for Parking & Roadways | 14 c.y.s. | $18.00 | $252.00 | 530 c.y.s. | $18.00 | $9,540.00 |
| Binder Pvt. | 18 ts. | $36.50 | $657.00 | 498 ts. | $36.50 | $18,177.00 |
| Finish Pvt. | 9 ts. | $37.00 | $333.00 | 359 ts. | $37.00 | $13,283.00 |
| Exc. & B'fill for Site Elect. Items | 8 L.F. | $7.00 | $56.00 | 967 L.F. | $7.00 | $6,769.00 |
| Striping | N/A | | | 1 L.S. | $1,300.00 | $1,300.00 |
| Stabilized Construction Entrances | N/A | | | 2 ea. | $1,500.00 | $3,000.00 |
| Loam for Site | N/A | | | 780 c.y.s. | $18.00 | $14,040.00 |
| Seed & Mulch Site | N/A | | | 56 units | $40.00 | $2,240.00 |

# MEMORANDUM

**DATE:** **September 5, 2001**

**TO:** **Sarah Hopkins, Senior Planner**

**FROM:** Stephen R. Bushey, P.E.

**SUBJECT:** **Intermodal Transfer Facility**

---

I have reviewed the materials dated 8/17/01 for the above project and find that they are in substantial conformance with the City's rules and regulations. The project is subject to the provisions of 38 M.R.S.A. Section 420-D and Chapters 500 and 502 of the MEDEP Regulations. Pursuant to the City of Portland's Delegated review authority the following Findings of Facts is made:

Stormwater Quantity Standards:

The stormwater quantity plan submitted by the applicant has been reviewed by the City staff and the findings are as follows:

A. Peak flow from the site and peak flow of Receiving waters:
   The applicant has proposed a closed stormwater collection systems that, based on the estimates or pre and post development stormwater runoff flows obtained by using the SCS TR-20 methodology, results in post development flows being at or below pre-development levels from the site as well as in the receiving waters below.
B. Maintenance:
   All components of the stormwater collection system will be maintained by the applicant in compliance with State and Local Standards.
C. Discharge to Freshwater Wetlands:
   Freshwater wetlands will receive stormwater in the same manner as before the development

Stormwater Quality Standards:

The proposed project includes the installation of a Vortechnics Model 7000 stormwater treatment system to remove grit and suspended solids from stormwater prior to discharge to the stream on the ravine. The installation of these measures will meet the requirements of the State and local standards for the treatment of stormwater runoff.

Based on these findings the City of Portland concludes the pursuant to 38 M.S.R.A Section 420-D and chapters 500 and 502 of the MEDEP regulations and The City's Technical Standards:

A. The applicant has made adequate provision to ensure that the development will meet the stromwater quantity and quality standards for : (1) Peak flow from the site and the receiving water; (2) Maintenance; and (3) Discharge to freshwater wetlands.

Therefore, I recommend the project be presented to the Portland Planning Board for approval, assuming no other issues from Staff or the Board.

If you have any questions please call.

# PROFESSIONAL SERVICES AGREEMENT

## OCTOBER CORPORATION
## 373 PRESUMSCOT STREET SITE
## C/O BOULOS PROPERTY MANAGEMENT
## ONE CANAL PLAZA
## PORTLAND, MAINE USA
## and
## FIELD SERVICES, INC.
## PORTLAND, MAINE USA

### ARTICLE 1
### PARTIES TO AND PURPOSE OF THE AGREEMENT

1.1 On November 26, 2001, this Professional Services Agreement (Agreement) is made between Field Services, Inc. (CONTRACTOR), with principal offices located at Portland, Maine, USA, and Boulos Property Management for OCTOBER CORPORATION (OWNER), with principal offices located at Portland, Maine, USA.

1.2 The purpose of this Agreement is to authorize Field Services, Inc. to inspect and maintain the Vortechnics Model 7000 Stormwater Treatment System (STS) at 373 Presumscot Street, Portland, Maine, on behalf of the OWNER; to authorize Field Services, Inc. to represent the OWNER to the governing regulatory authority concerning issues related to the inspection and maintenance of the STS; and to bind both parties to the terms herein.

### ARTICLE 2
### RESPONSIBILITIES OF FIELD SERVICES, INC.(CONTRACTOR)

The CONTRACTOR will:

2.1 Designate a specific representative who will be responsible for the administration and monitoring of this agreement, and who will act as liaison with Boulos Property Management/October Corp. (OWNER) and regulatory agencies.

2.2 Perform inspection and/or maintenance activities in accordance with previously accepted proposals and/or plans referenced herein or attached.

2.3 Use its best professional judgment concerning the execution of the site inspection and/or maintenance work schedule considering

local weather cycles, site access, labor disputes, etc. beyond its control.

2.4 To the best of its professional ability, represent the OWNER in a truthful and responsible manner to the regulatory authority.

2.5 During the course of the execution of the annual inspection and maintenance program, make observations of system defects beyond the scope of the annual inspection and maintenance program and make recommendations for their remedy.

2.6 With authorization from the OWNER, enter into agreements with qualified subcontractors to provide specific maintenance or construction services beyond the scope of services in this Agreement as may be required to assure proper function of the facilities.

2.7 Give prompt written notice to OWNER whenever Field Services, Inc. observes or otherwise becomes aware of any defect in this Agreement.

## ARTICLE 3
## RESPONSIBILITIES OF BOULOS/OCTOBER CORP. (OWNER)

The OWNER will:

3.1 Designate a specific representative who will be responsible for the administration and monitoring of this agreement, and who will act as liaison with Field Services, Inc. and regulatory agencies.

3.2 Provide Field Services, Inc. with two (2) copies of the Site Stormwater Treatment System Operation and Maintenance Plan, and two copies of the Design Plans of the Stormwater Treatment System prepared for the site. If Field Services, Inc. has developed the O&M Plan for this site, this paragraph does not apply.

3.3 Guarantee access to the property, grant approval for use of private hydrants, and make all provisions for Field Services, Inc. to enter upon public and private lands as required for Field Services, Inc. to perform its services under this Agreement.

3.4 Give prompt written notice to Field Services, Inc. whenever the OWNER observes or otherwise becomes aware of any defect in the services of this Agreement.

3.5 Provide any legal services which may be necessary to implement the AGREEMENT.

## ARTICLE 4
## PROJECT SCHEDULE

The CONTRACTOR will begin work upon execution of this Agreement and will conduct the required inspection and maintenance in accordance with the schedules defined in the site O&M Plan, or any modification thereto.

## ARTICLE 5
## COMPENSATION

The CONTRACTOR shall be compensated for services in accordance with the following schedule:

A. Stormwater Treatment System Compliance Program

| | |
|---|---|
| Annual Inspection/Reporting/Recordkeeping/Cleaning | $1,050.00 |
| Sediment Disposal | $100.00/ton |

B. Administrative & Management Services outside the STS Compliance Program shall be compensated as follows*:

Consulting Rate $ 95.00/hour or quoted fixed price

*Consulting services including, but not limited to, modifying site drawings and O&M plans, negotiating with regulatory authorities, and construction or special project management will be provided as needed and only at OWNER's request, and are not included in this AGREEMENT.

## ARTICLE 6
## PAYMENT

Payment for services rendered by Field Services, Inc. shall be in accordance with the following:

6.1 Invoices will be submitted by Field Services, Inc. at least annually at completion of the work and will document the services provided during the period. If documentation of services is not satisfactory to the OWNER, Field Services, Inc. shall be notified within five (5) working days of receipt of invoice.

6.2 Payment shall be made by the OWNER within thirty (30) days of receipt of the invoice.

6.3 Payments due Field Services, Inc. under this AGREEMENT shall be subject to interest of one and one-half percent (1-1/2%) per month commencing thirty (30) days after the date of invoice.

## ARTICLE 7
## INSURANCE

The CONTRACTOR shall, during the performance of the work contemplated in the Agreement, keep in force at least the following insurance:

| | |
|---|---|
| COMMERCIAL GENERAL LIABILITY (per Occur): | |
| General Aggregate | $2,000,000 |
| Products-COMP/OP AGG | $2,000,000 |
| Personal & ADV Injury | $1,000,000 |
| Each Occurrence | $1,000,000 |
| WORKERS COMP: | AS REQUIRED BY MAINE LAW |
| AUTOMOBILE LIABILITY: | AS REQUIRED BY MAINE LAW |

## ARTICLE 8
## GENERAL CONSIDERATIONS

8.1 The CONTRACTOR shall notify the OWNER'S designated representative of any upcoming inspection at least seven days prior to the inspection.

8.2 The CONTRACTOR shall maintain all inspection logs, reports, and data on file at his office for a period of 5 years, and shall make such records available during regular working hours for inspection by the OWNER or appropriate designated agencies. The CONTRACTOR shall make a report of completed maintenance and/or inspection to the regulatory authority as prescribed in the site O&M Plan.

8.3 The CONTRACTOR shall comply with all local, State and Federal safety rules and regulations which may apply to any services provided under this Agreement, and shall hold the OWNER harmless from any and all liability and claims which may result from Field Services, Inc.'s operations.

8.4 The term of the Agreement shall be THREE years, except that the OWNER will have the option to extend the Agreement for an additional TWO years, subject to a mutually agreeable adjustment to the compensation schedule.

## ARTICLE 9
## TERMINATION OF AGREEMENT

This AGREEMENT may be terminated by either party by thirty (30) days' written notice to the other party without cause; by mutual written agreement to the parties; or by either party on one day's written notice to the other in the event of substantial failure to perform in accordance with the terms hereof by the other party through no fault of the terminating party. If this AGREEMENT is terminated, Field Services,

Inc. shall be paid for the extent of services performed by him to the effective date of termination.

## ARTICLE 10
## DELEGATION OF DUTIES

Neither the OWNER nor Field Services, Inc. shall delegate his duties in this AGREEMENT without the written consent of the other party.

## ARTICLE 11
## EXTENT OF AGREEMENT

This AGREEMENT represents the entire agreement for RECURRING INSPECTION AND MAINTENANCE services to be rendered at this site between the OWNER and Field Services, Inc. and supersedes all prior negotiations, representations or agreements, either written or oral, unless attached to this AGREEMENT.

## ARTICLE 12
## GOVERNING LAW

The terms of this AGREEMENT shall be construed and interpreted under, and all respective rights and duties of the parties shall be governed by, the laws of the State of Maine.

IN WITNESS WHEREOF the authorized parties hereto have made and executed this Agreement as of the day and year first written above.

OCTOBER CORP. c/o BOULOS PROPERTY MANAGEMENT
(OWNER):

by Paul Ulrenek

Paul Ulrenek, VP
Printed Name/Title

12/7/01
Date

Agent, October Corp

FIELD SERVICES, INC.
(CONTRACTOR):

by

Alan. S. Lyscars, President
Printed Name/Title

11/26/01
Date

ATTACHED BY REFERENCE

1. PRESUMSCOT STREET BUDGET PROPOSAL, Field Services, Inc., NOVEMBER 12, 2001.

Planning & Urban Development

# CITY OF PORTLAND

October 11, 2001

Morris Fisher
CB Richard Ellis/TheBoulos Co.
One Canal Plaza
Portland, ME 04101

re: 383 Presumpscot Street Intermodal Facility CBL: 420 A001001

Dear Mr. Fisher:

On September 25, 2001, the Portland Planning Board approved the site plan for the intermodal facility/parking lot at 383 Presumpscot Street. Since the Planning Board's approval, the Planning Department has received a request from you to begin site work due to timing concerns. We have received and approved your cost estimate for the performance guarantee and are waiting for the final paperwork to be submitted, in addition to the inspection fee.

Under the authority granted in Section 14-540(b)(2), your contractor may commence site work after holding a preconstruction meeting with our Development Review Coordinator, Jay Reynolds. You may reach Mr. Reynolds at 874-8632.

We look forward to receiving and processing the performance guarantee paperwork early next week.

Sincerely,

Alexander Jaegerman,
Chief Planner

cc.: Sarah Hopkins, Development Review Services Manager
P. Samuel Hoffses, Building Inspector
Marge Schmuckal, Zoning Administrator
Tony Lombardo, Project Engineer
Jay Reynolds, Development Review Coordinator
William Bray, Director of Public Works
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Lt. Gaylen McDougall, Fire Prevention
Inspection Department
Lee Urban, Director of Economic Development
Don Hall, Appraiser, Assessor's Office
Susan Doughty, Assessor's Office
Approval Letter File

CB Richard Ellis
Boulos Property Management

One Canal Plaza
Portland, ME 04101
207.871.1290 Tel
207.772.2647 Fax
www.boulos.com

December 12, 2001

Ms. Sarah Hopkins
Planning Department
City of Portland
389 Congress Street
Portland, ME 04101

RE: Intermodal Transfer Facility
273 Presumpscot Street

Dear Sarah:

Enclosed please find a copy of the maintenance agreement October Corporation has executed with Field Services, Inc., for maintenance of the Vortechnics unit at the above referenced property.

I understand you needed a copy of this contract for your records.

Please let me know if you have any questions.

Sincerely,

KIM A. FARRAR
Development Coordinator

Encl.

# SITE REVIEW
# PRE-APPLICATION

# 383 PRESUMPSCOT STREET
# PORTLAND, MAINE

## OCTOBER CORPORATION
## PORTLAND, MAINE

## JUNE 2001

SME

*Sevee & Maher Engineers, Inc.*
*Waste Management and Hydrogeologic Consultants*
*Cumberland Center, Maine*

## Statement of Financial Position 2000

Year Ended December 31, 2000

ASSETS

| | | |
|---|---|---|
| Investments, at market | | $ 54,163,218 |
| Cash and cash equivalents | | 100,451 |
| Beneficial interest in trust | | 157,558,327 |
| Federal excise tax receivable | | 54,528 |
| Program-related investments | | 8,458,063 |
| Assets held in title-holding corporation | | 73,735,541 |
| Property and equipment, net of accumulated depreciation of $83,955 at December 31, 2000 | | 309,902 |
| Other assets | | 135,752 |
| | TOTAL ASSETS | $294,515,782 |

LIABILITIES

| | | |
|---|---|---|
| Payables and other liabilities | | $ 26,460 |
| Deferred federal excise tax | | 118,000 |
| | TOTAL LIABILITIES | 144,460 |

NET ASSETS

| | |
|---|---|
| Unrestricted net assets | 294,371,322 |
| TOTAL LIABILITIES AND NET ASSETS | $ 294,515,782 |

Arts, Culture & Humanities | Education | Environment | Health | Human Services | Other | Public/Society Benefit | | Activities 2000 | Allocation Across Fields

# 383 PRESUMPSCOT STREET
# APPLICATION FOR SITE PLAN APPROVAL
# BY OCTOBER CORPORATION

The October Corporation, P.O. Box 17516, Portland, Maine 04112-8516, is requesting site plan approval for the development of a intermodal transfer facility on the property it owns at 383 Presumpscot Street in Portland, Maine. The October Corporation (a wholly owned subsidiary of the Libra Foundation) is currently developing an office park in New Gloucester and owns several office buildings in downtown Portland. The proposed facility will provide an opportunity to utilize a mass transportation system for the commuter traffic associated with the Corporation's projects. October Corporation is currently investigating arrangements with area bussing firms. The parcel's location adjacent to the St. Lawrence railroad would also provide an opportunity for commuter rail service in the future.

The subject parcel is approximately 4.08 acres in size, with 650 feet of frontage on Presumpscot Street. The rear of the property borders the St. Lawrence railroad property. The site has historically been used by various contracting firms. The site is gently sloping towards the rear of the property and towards the southern boundary. A ravine, which carries stormwater from this section of Presumpscot Street to the ocean, is located on the south side of the property.

The site plan depicts the potential for a future build-out of the property. Initially, a 109-space parking lot would be constructed, along with a bus drop-off and loading area. The existing driveway entrance to the site would serve as one entrance to the parking lot, and a second entrance would be created approximately 250 feet south of the existing entrance. If the demand exists, an additional 72 spaces can be added on the north side of the parking facility. The site plan also depicts a commuter station of 1250 square feet, consisting of a small waiting room, a ticket booth, and a rest room. The station would be constructed once the facility's demand is established.

Power and telephone service exist on overhead poles along Presumpscot Street. Underground conduits for these services will be brought onto the site during the construction of the first phase of the parking lot. The Portland Water District has a 10-inch main within the Presumpscot Street

right-of-way and currently has a service on-site. The wastewater generated from the facility is estimated to be approximately 550 gallons per day. The public sewer is located approximately 400 feet south of the parcel and as a result of the grades on Presumpscot Street, the sewer main cannot be extended to serve the site. An on-site subsurface wastewater disposal system will be utilized to serve the future commuter station. The location of the system is shown on the site plan and a HHE-200 form is included with this application. Solid waste generated at the site will be minimal, a cleaning service will dispose of this at the end of each business day.

The proposed project will not exceed the threshold of creating three acres of impervious area and thus will not require a Maine Department of Environmental Protection (MDEP) Site Location Permit. The only wetlands that exist on the site are located within the ravine along the southern property line. There are no wetlands being impacted by the proposed project.

Over the years, the site has been filled and graded and thus there are no unusual natural areas, wildlife or fisheries habitats on the site. The soils are mapped as a Buxton silty loam. Test pits were excavated on the site to determine the depth of fill placed on the site. The test pit locations are shown on the site plan and a copy of the test pit logs are included with this application. The soils are suitable for the proposed project. Temporary and permanent erosion control measures are included on the plans.

The stormwater discharge from the site will be collected by catch basins and transported via the storm drainpipes to Vortech's Model 7000 for sediment removal prior to discharge to the ravine located along the southern property boundary.

In accordance with the submittal requirements included with the Site Plan, are elevations of the future building, a landscaping plan, a lighting plan a boundary survey, a storm water management plan, copies of the deeds and a copy of the Libra Foundation statement of Financial Position 2000.

# CITY OF PORTLAND, MAINE
## SITE PLAN CHECKLIST

Intermodal Transfer Facility 393 Presumpscot St
Project Name, Address of Project

I.d. Number

| Submitted () & Date | Item | Required Information | Section 14-525 (b,c) |
|---|---|---|---|
| 6/26/01 | (1) | Standard boundary survey (stamped by a registered surveyor, at a scale of not less than 1 inch to 100 feet and including: | 1 |
| 6/26/01 | (2) | Name and address of applicant and name of proposed development | a |
| 6/26/01 | (3) | Scale and north points | b |
| 6/26/01 | (4) | Boundaries of the site | c |
| 6/26/01 | (5) | Total land area of site | d |
| 6/26/01 | (6) | Topography - existing and proposed (2 feet intervals or less) | e |
| | (7) | Plans based on the boundary survey including: | 2 |
| 6/26/01 | (8) | Existing soil conditions | a |
| 6/26/01 | (9) | Location of water courses, marshes, rock outcroppings and wooded areas | b |
| 6/26/01 | (10) | Location, ground floor area and grade elevations of building and other structures existing and proposed, elevation drawings of exterior facades, and materials to be used | c |
| 6/26/01 | (11) | Approximate location of buildings or other structures on parcels abutting the site | d |
| 6/26/01 | (12) | Location of on-site waste receptacles | e |
| 6/26/01 | (13) | Public utilities | e |
| 6/26/01 | (14) | Water and sewer mains | e |
| 6/26/01 | (15) | Culverts, drains, existing and proposed, showing size and directions of flows | e |
| 6/26/01 | (16) | Location and dimensions, and ownership of easements, public or private rights-of-way, both existing and proposed | f |
| 6/26/01 | (17) | Location and dimensions of on-site pedestrian and vehicular accessways | g |
| 6/26/01 | (18) | Parking areas | g |
| 6/26/01 | (19) | Loading facilities | g |
| 6/26/01 | (20) | Design of ingress and egress of vehicles to and from the site onto public streets | g |
| 6/26/01 | (21) | Curb and sidewalks | g |
| 6/26/01 | (22) | Landscape plan showing: | h |
| 6/26/01 | (23) | Location of existing proposed vegetation | h |
| 6/26/01 | (24) | Type of vegetation | h |
| 6/26/01 | (25) | Quantity of plantings | h |
| 6/26/01 | (26) | Size of proposed landscaping | h |
| 6/26/01 | (27) | Existing areas to be preserved | h |
| 6/26/01 | (28) | Preservation measures to be employed | h |
| 6/26/01 | (29) | Details of planting and preservation specifications | h |
| N/A | (30) | Location and dimensions of all fencing and screening | i |
| location 6/26/01 | (31) | Location and intensity of outdoor lighting system | j |
| | (32) | Location of fire hydrants, existing and proposed | k |
| 6/26/01 | (33) | Written statement | c |
| 6/26/01 | (34) | Description of proposed uses to be located on site | l |
| 6/26/01 | (35) | Quantity and type of residential, if any | l |
| 6/26/01 | (36) | Total land area of the site | b2 |
| 6/26/01 | (37) | Total floor area and ground coverage of each proposed building and structure | b2 |
| | (38) | General summery of existing and proposed easements or other burdens | c3 |
| 6/26/01 | (39) | Method of handling solid waste disposal | 4 |

| | | | |
|---|---|---|---|
| 6/26/01 | (40) | Applicant's evaluation of availability of off-site public facilities, including sewer, water and streets | 5 |
| 6/26/01 | (41) | Description of any problems of drainage or topography, or a representation that there are none | 6 |
| | (42) | An estimate of the time period required for completion of the development | 7 |
| 6/26/01 | (43) | A list of all state and federal regulatory approvals to which the development may be subject | 8 |
| N/A | (44) | The status of any pending applications | 8 |
| N/A | (45) | Anticipated timeframe for obtaining such permits | h8 |
| N/A | (46) | A letter of non jurisdiction | h8 |
| 6/26/01 | (47) | Evidence of financial and technical capability to undertake and complete the development including a letter from a responsible financial institution stating that is has reviewed the planned development and would seriously consider financing it when approved. | |

Note: Depending on the size and scope of the proposed development, the Planning Board or Planning Authority may request additional information, including (but not limited to):

- drainage patterns and facilities;
- erosion and sedimentation controls to be used during construction;
- a parking and/or traffic study;
- a noise study;
- an environmental impact study;
- a sun shadow study;
- a study of particulates and any other noxious emissions; and
- a wind impact analysis.

Other comments:

# STORMWATER MANAGEMENT PLAN
# 383 PRESUMPSCOT STREET
# PORTLAND, MAINE

## A. INTRODUCTION

This stormwater management plan for proposed development of a transportation intermodel facility at 383 Presumpscot Street in Portland, Maine was designed to comply with the Maine Department of Environmental Protection (MDEP) Rules for stormwater quantity as outlined in 06-096 CMP, Chapter 500.3 Stormwater Management and using three general objectives of MDEP's Stormwater Management for Maine Best Management Practices (MDEP BMP)(MDEP, 1995):

1. effective drainage
2. flood prevention
3. erosion control

As designed, peak runoff rates for post-development conditions at the site will be less than those from the pre-development conditions.

The pre- and post-development surface water peak runoff rates were evaluated for the watershed in which the intermodel facility development is included. Stormwater flows were calculated for 2-, 10-, and 25-year/24-hour storm events with Type III Soil Conservation Service rainfall distribution and Type 2 antecedent moisture conditions, using HydroCAD computer modeling system by Applied Microcomputer Systems of Chocorua, New Hampshire.

## B. PROJECT DESCRIPTION

The October Corporation (a wholly owned subsidiary of the Libra Foundation) of Portland, Maine owns a parcel of land at 383 Presumpscot Street in Portland, Maine. The subject parcel is approximately 4.1 acres. The rear of the property borders the St. Lawrence and Atlantic Railroad property. Various contracting firms have historically used the site. The site slopes gently to the

rear of the property and toward a ravine that carries storm water located at the south end of the property. The property is currently vacant and there are two garages remaining on the site.

Proposed site development includes construction of a 171-space parking lot and a 3000 square foot building.

The total existing impervious area within the site is approximately 0.5 acres in pre-development. The intermodel facility project will result in an impervious area of approximately 1.57 acres.

## C. SITE WATERSHEDS

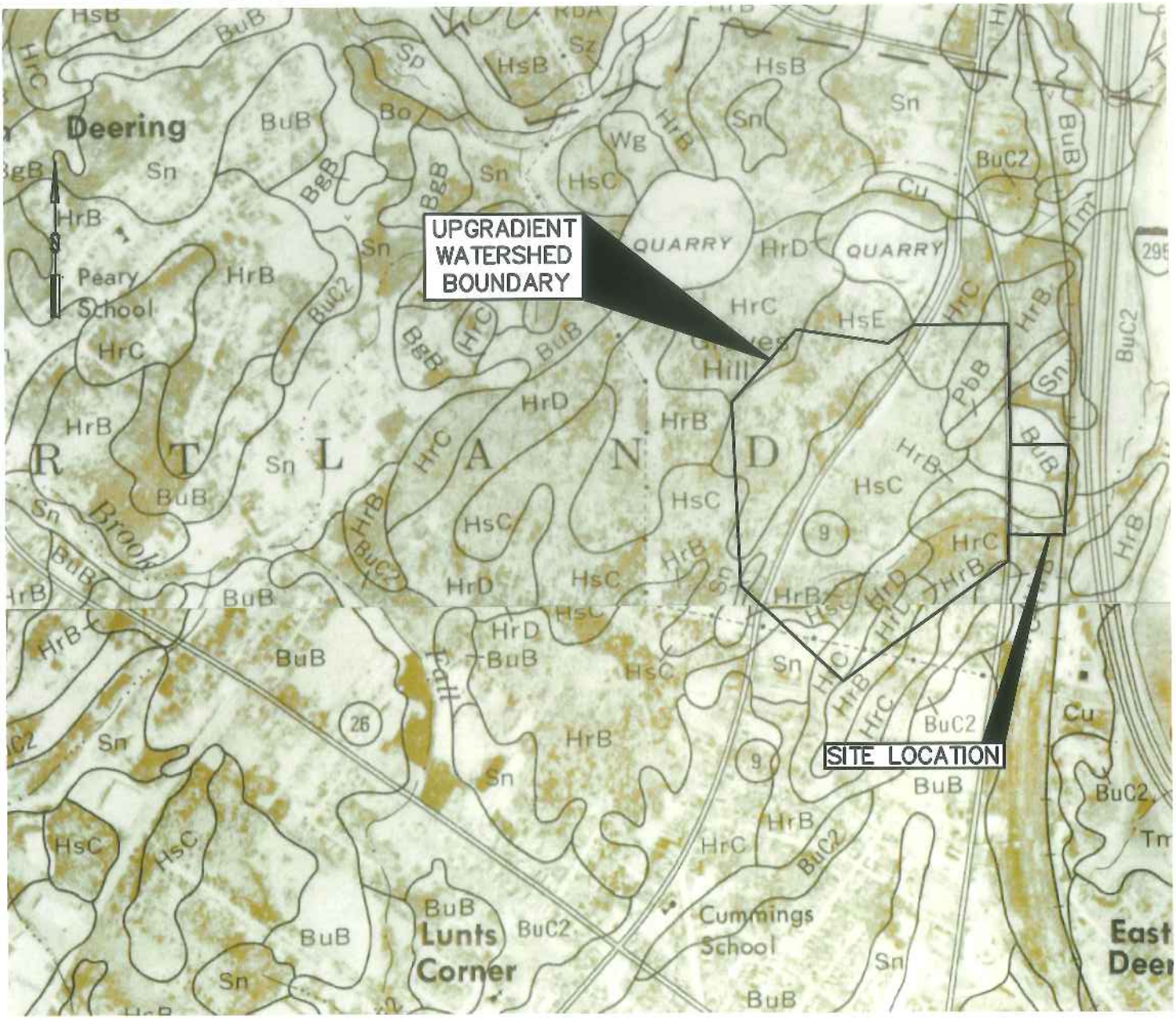
The proposed intermodel facility site is situated in the Casco Bay Watershed. The intermodel facility watershed drains to small-unnamed tributaries, which flow eastward approximately 500 feet to their confluence with Casco Bay.

Surficial soils in the watersheds were mapped by the SCS as Paxton, Hollis, and Buxton series soils. For stormwater modeling purposes these soils were modeled as hydrologic soil group (HSG) C soils (see Figure 1).

An upgradient watershed conveys water to the ravine on the south side of the intermodel facility property. This upgradient watershed is located on the west side of Presumpscot Street and extends to the top of Graves Hill as shown on Figure 2. Pre- and post-development conditions for the intermodel facility site are shown on Drawings D-100 and D-101.

### Intermodel Facility Watershed Stormwater Flows

The study area for the intermodel facility watershed consists of approximately 67.5 acres in pre-development and post-development conditions as indicated on Figure 2 and Drawings D-100 and D-101. The area of study consists of two points of analysis for storm water flows.




| MAP DESIGNATION | NAME | HYDROLOGIC SOIL GROUP |
|---|---|---|
| BuB | BUXTON, SILT LOAM | C |
| BuC2 | BUXTON, SILT LOAM | C |
| HrB | HOLLIS, FINE SANDY LOAM | C |
| HrC | HOLLIS, FINE SANDY LOAM | C |
| HsC | HOLLIS, VERY ROCKY FINE SANDY LOAM | C |
| HsE | HOLLIS, VERY ROCKY FINE SANDY LOAM | C |
| PbB | PAXTON, FINE SANDY LOAM | C |

REFERENCE: SOIL SURVEY OF CUMBERLAND COUNTY, MAINE BY U.S. DEPT. OF AGRICULTURE, AUGUST 1974. MAPS 76 & 82.

FIGURE 1
MEDIUM INTENSITY SOILS MAP
OCTOBER CORPORATION
INTERMODAL TRANSPORTATION FACILITY
PRESUMPSCOT STREET
PORTLAND, MAINE

500 0 1000 2000 FEET

DWG: SOILS LMN: REV: 6/21/01

SME
Sevee & Maher Engineers, Inc.

are shown in Drawing D-100. The catchment boundaries and $T_c$ routing for post-development site conditions are shown in Drawing D-101.

TABLE 1

SUMMARY OF STORMWATER ROUTING CONDITIONS
PRESUMPSCOT STATION

PRE-DEVELOPMENT

| Analysis Point | Catchment Area | Area (acres) | $C_N$ (weighted) | $T_c$* (min) | Peak Flow** (cfs) (2/10/25-yr storm) |
|---|---|---|---|---|---|
| 1 | 1 | 1.69 | 85 | 16.6 | 2.2/4.3/5.3 |
| 2 | 2 | 3.24 | 86 | 25.2 | 46.2/108.8/140.8 |
| | 217 | 8.32 | 72 | 23.9 | |
| | 218 | 9.46 | 71 | 23.9 | |
| | 219 | 44.8 | 78 | 19.6 | |

POST-DEVELOPMENT

| Analysis Point | Catchment Area | Area (acres) | $C_N$ (weighted) | $T_c$* (min) | Peak Flow** (cfs) (2/10/25-yr storm) |
|---|---|---|---|---|---|
| 1 | 1 | 1.05 | 75 | 16.5 | 0.80/1.90/2.51 |
| 2 | 201-219 | See HydroCAD Data | See HydroCAD Data | See HydroCAD Data | 45.4/107.6/139.4 |

Notes

* $T_c$ is to subcatchment downgradient boundary or detention pond, as applicable.
** Peak flow of analysis point after routing through detention ponds and/or reaches.

As indicated in Table 1, the post-development peak rates of runoff at analysis points 1 and 2 are less than those of pre-development conditions. The decrease in SC-1 peak flow rates is accomplished by decreasing the area of SC-1 in post-development conditions. The decrease in SC-2 peak flow rates is due to allowing peak flows from the site to leave the watershed prior to the peak flows from the upgradient watershed.

## D. PROPOSED DRAINAGE FACILITIES

Surface water at the site will be collected in catch basins, conveyed via the storm drain pipes to a vortex for sediment removal prior to discharge to the ravine located along the southern property border. Locations of catch basins, piping, and the vortex system are shown on Drawing D-101. Catch Basins will consist of 4-foot diameter pre-cast concrete structures. Storm drains will consist of 12, 15, and 18-inch diameter PVC Pipe. The piping system was sized to handle projected flows during the 24-hour/25-year rainfall event. Pipes were also sized to allow from a minimum flow rate of 3.0 feet/second during a 2-year storm event to limit the buildup of grit and sediment in the piping. A Vortechnics Model 7000 storm water treatment system will be installed to provide removal of grit and suspended solids from storm water prior to discharge to the stream in the ravine.

The design capacity of stormwater drainage structures was based on SCS TR-20 methodology. Pipes were sized using the HydroCAD. Results of pipe sizing are indicated on HydroCAD printouts in Appendix B. Water quality worksheets are contained in Appendix C.

SME

Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants

April 10, 2001

00015.05
010409pu.doc

Mr. Paul Ureneck
Boulos Property Management
One Canal Plaza
Portland ME 04101

Subject: Subsurface Conditions, 373 Presumpscot Street Property
Portland, Maine

Dear Paul:

The purpose of this letter is to describe the subsurface conditions encountered in test pits made at the 373 Presumpscot Street Property (i.e., site) on April 6, 2001. Test pits were made to evaluate fill thickness and presence/nonpresence of granular materials suitable for parking lot construction. A total of 20 test pits were excavated using a backhoe supplied by White Bros. Construction of Westbrook, Maine. The test pits were identified as test pits TP-101 through TP-120. The approximate locations of the test pits with respect to the site property boundaries and existing site structures are shown on Figure 1.

The site is generally flat and has two wood frame buildings located along its back (east) side. The south side of the site is filled land as evidenced by abrupt changes in topography and vegetation. The back of the property is paralleled by the Canadian National Railway. The front (west) side of the property is paralleled by Presumpscot Street. The north and south sides of the property are abutted by private ownership.

The native soils encountered at the site consisted of brown and gray silty clays. Where the native silty clays were observed, they were estimated to be medium to stiff in terms of consistency. At several site locations the native silty clay was overlain by clayey fill soil mixed with wood, masonry, pavement, and other debris. Groundwater, in the form of seepage along the test pit sidewalls, was observed within the fill materials. At test pit locations TP-102 and TP-103 a slight oily odor was detected along with oil sheen presence on the test pit seepage. The test pit depths varied from approximately 2 to 8 feet. The deeper test pits generally exhibited the greatest thickness of fill. Essentially, no granular materials suitable for parking lot construction were encountered in the test pits. Table 1 summarizes the soil conditions encountered in the test pits. Excavation of each test pit was typically halted once native soils were encountered in effort to minimize disturbance of the foundation soils for future parking lot construction. Upon completion,



4 Blanchard Road P.O. Box 85A Cumberland Center, ME 04021 (207) 829-5016 FAX (207) 829-5692 www.smemaine.com

each test pit was backfilled in layers and tamped with the backhoe bucket to obtain compaction.

TABLE 1

| Test Pit | Fill Thickness (feet) | Fill Description |
|---|---|---|
| TP-101 | 3.5 | Soft brown clayey soil intermixed with pavement, cinders and ash |
| TP-102 | 6+ | Soft clayey soil intermixed with concrete, wood and rubble |
| TP-103 | 5+ | Soft clayey soil with many cobbles and small boulders, heavy seepage |
| TP-104 | 0 | No fill observed (stiff native silty clay) |
| TP-105 | 1 | Soft brown silty soil |
| TP-106 | NA | Pipe trench with pipe buried 18 inches below ground surface and stone backfill |
| TP-107 | 0.5 | Soft brown clayey soil intermixed with sand and gravel |
| TP-108 | 3+ | Soft clayey soil mixed with rubble and large fragments of concrete |
| TP-109 | 3 | Soft clayey soil intermixed with rubble |
| TP-110 | 0.5 | Sand and gravel intermixed with clayey soil |
| TP-111 | 0.5 | Sand and gravel intermixed with clayey soil |
| TP-112 | 1 | Soft clayey soil and buried wooden log |
| TP-113 | 0 | No fill observed (stiff native silty clay) |
| TP-114 | 2 | Soft clayey soil |
| TP-115 | 4.5 | Soft clayey soil intermixed with wood debris |
| TP-116 | 6 | Soft clayey soil intermixed with wood debris |
| TP-117 | 2.5 | Edge of leachfield, 18 inches sand over 12+ inches stone |
| TP-118 | 1 | Leachfield distribution box, buried below 12 inches stone |
| TP-119 | 0.5 | Concrete septic tank |
| TP-120 | 1 | Soft clayey soil |

Three buried drainage features were encountered as part of the test pit activities.

1. A leachfield (approximately 18 inches of sand over 12+ inches of stone) and a concrete septic tank (estimated 750 to 1,000 gallons) were encountered adjacent to the east side of the larger of the two site buildings. The approximate location of the tank and leachfield are shown on Figure 1. A concrete distribution box was encountered separating the leachfield and tank. The distribution box was left marked in the field by three concrete blocks. No visible damage was sustained by the leachfield, distribution box, septic tank, or associated piping as result of the test pitting activities. A small portion of the leachfield (north end) was excavated and no pipes were encountered in that area.

2. A catch basin was identified on the front (west) side of the larger site building. An 8- to 10-inch outlet pipe was observed running approximately south from the catch basin at a depth of about 2 feet. The

outlet pipe apparently turns southeast at some distance from the catch basin to discharge near the edge of the eastern property boundary. The approximate location of the catch basin and outlet pipe are shown on Figure 1.

3. A buried concrete tank was observed adjacent to the front of the building. Based on inspection of the tank interior (through the tank accessway), several pipes connect to the tank which appeared to enter the tank from direction(s) parallel to the west wall of the building.

Thank you for allowing Sevee & Maher Engineers, Inc. to assist you in understanding the subsurface conditions at the 373 Presumpscot Street Property. If we can be of any further assistance, or if we can clarify any of the information presented herein, please do not hesitate to contact us.

Respectfully,

SEVEE & MAHER ENGINEERS, INC.

Matthew W. Muzzy, P.E.
Geo-Environmental Engineer

cc: Robert Arsenault (SME)

**SITE REVIEW PRE-APPLICATION**
**MULTI-FAMILY/ATTACHED SINGLE FAMILY DWELLINGS/TWO-FAMILY DWELLING OR COMMERCIAL STRUCTURES AND ADDITIONS THERETO**

In the interest of processing your application in the quickest possible manner, please complete the Information below for Site Plan Review

Note: **If you or the property owner owes real estate or personal property taxes or user charges on ANY PROPERTY within the City, payment arrangements must be made before permits of any kind are accepted.**

**Applicant**: October Corporation
**Application Date**: June 26, 2001
**Applicant's Mailing Address**: P.O. Box 17516, Portland, ME 04112
**Consultant/Agent**: Morris Fisher, Boulos Property Management
Robert Arsenault, P.E. Sevee & Maher Engineers, Inc.
**Project Name/Description**: Intermodal Transfer Facility
**Applicant/Agent Daytime Telephone and FAX**: Fisher: 871-1290
Arsenault: 829-5016
**Address of Proposed Site**: Presumpscot Street, Portland, Maine
**Assessor's Reference, Chart #, Block, Lot#**: 420-A-001
**Proposed Development (check all that apply)**: __X__New Building_____Building Addition_____Change of Use
_____Residential_____Office_____Retail_____Manufacturing_____Warehouse/Distribution
_____Other (specify) Parking lot
**Proposed Building Square Footage and/or # of Units**: 1250 SF
**Acreage of Site**: 4.08 ac
**Zoning**:

**You must include the following with your application:**
1. **A Copy of Your Deed or Purchase and Sale Agreement**
2. **Nine (9) sets of Site Plan packages containing the information found in the attached sample plans and checklist. (Section 14-522 of the Zoning Ordinance outlines the process, copies are available for review at the counter, photocopies are $0.25 per page)**

I hereby certify that I am the Owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if an approval for the proposed project or use described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this approval at any reasonable hour to enforce the provisions of the codes applicable to this approval.

**Signature of applicant**: October Corporation
By: Boulos Property Management, Agent
By: Morris Fisher, President

_____ June 26, 2001
(Morris Fisher)

**Site Review Fee: Major $500.00/Minor $400.00**
**This application is for site review ONLY, a Building Permit application and associated fees will be required prior to construction.**

# QUITCLAIM DEED WITH COVENANT

KNOW ALL BY THESE PRESENTS, That 383 PRESUMPSCOT STREET, INC., a Maine corporation, with a place of business in Yarmouth, Cumberland County, Maine ("Grantor"), for consideration paid, grants to OCTOBER CORPORATION, a Maine nonprofit corporation, whose mailing address is Three Canal Plaza, Portland, Maine 04112 ("Grantee"), with Quitclaim Covenant, the land and buildings in Portland, Cumberland County, Maine, described more particularly as follows:

A certain lot or parcel of land situated on the easterly sideline of Presumpscot Street in Portland, Cumberland County, Maine, as depicted on a plan entitled "Plan of Land at Presumpscot Street Portland, Maine," dated November 27, 1995 and prepared for Timothy E. Sanders by Land Use Consultants, Inc., being more particularly described as follows:

Commencing at a 5/8 inch rebar with cap marked PLS 1155, which rebar is not depicted on the above-referenced plan, on the easterly sideline of Presumpscot Street, at the southwesterly corner of lot described in a deed from Timothy E. Sanders to Lucie Wing Couture dated November 13, 1996 and recorded in Cumberland County Registry of Deeds in Book 12815, Page 292, thence,

| | |
|---|---|
| S 14°-52'-06" W | A distance of one fifty-one and 00/100 (151.00') feet, along Presumpscot Street, to a stake as depicted on the above referenced plan and the Point of Beginning; thence, |
| S 76°-54'-50" E | A distance of two hundred ninety six and 82/100 (296.82') feet to the westerly sideline of the Canadian National Railway Company easement or land; thence, |
| S 20°–42'-24" W | A distance of six hundred six and 88/100 (606.88') feet, along the westerly sideline of said Canadian National Railway Company easement or land to a point; thence, |
| N 61°–53'-41" W | A distance of two hundred forty one and 36/100 (241.36') feet to Presumpscot Street; thence, |
| N 14°-52'-06" E | A distance of five hundred thirty nine and 23/100 (539.23') feet along Presumpscot Street to the Point of Beginning. |

MAINE REAL ESTATE TAX PAID

The above said metes and bounds contain a total area of 3.50 acres, or 152,617 square feet more or less.

TOGETHER WITH all right, title and interest in and to reversionary rights, if any, in and to said railroad right-of-way of that portion of the Grand Trunk Railroad lying adjacent to the above-described land, later the Canadian National Railway Company., SUBJECT TO said railroad right of way.

TOGETHER WITH all right, title and interest in and to the portion of Presumpscot Street lying adjacent to the above-described land.

IN WITNESS WHEREOF, the said 383 Presumpscot Street, Inc. has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Timothy E. Sanders, its President, this 26th day of March, 2001.

**383 PRESUMPSCOT STREET, INC.**, a Maine corporation

By: Timothy E Sanders
Timothy E. Sanders
Its President

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.

On March 26, 2001, personally appeared the above-named Timothy E. Sanders, President of said corporation in his said capacity, and acknowledged the foregoing to be his free act and deed and the free act and deed of said 383 Presumpscot Street, Inc.

Before me,

SEAL

sanders-fw QCW Sanders Lot

Notary Public
Printed Name: Janet D. Eustis

SEAL

RECEIVED
RECORDED REGISTRY OF DEEDS
2001 MAR 28 PM 1:22
CUMBERLAND COUNTY
John B O'Brien

0014242 BK16137PG027

# QUITCLAIM DEED WITHOUT COVENANT
## RELEASE DEED

KNOW ALL BY THESE PRESENTS, That **383 PRESUMPSCOT STREET, INC.**, a Maine corporation, with a place of business in Yarmouth, Cumberland County, Maine ("Grantor"), for consideration paid, releases to **OCTOBER CORPORATION**, a Maine nonprofit corporation, whose mailing address is Three Canal Plaza, Portland, Maine 04112 ("Grantee"), the land in Portland, Cumberland County, Maine, described as follows:

MAINE REAL ESTATE TAX PAID

A certain lot or parcel of land situated on the easterly side of Presumpscot Street in Portland, Cumberland County, Maine, being the "AREA OF UNKNOWN OWNERSHIP" as depicted on a plan entitled "Plan of Land at Presumpscot Street, Portland, Maine," dated November 27, 1995 and prepared for Timothy E. Sanders by Land Use Consultants, Inc., and more particularly described as follows:

Commencing at a 5/8 inch rebar with cap marked PLS 1155, which rebar is not depicted on the above referenced plan, on the easterly sideline of Presumpscot Street, being the southwesterly corner of lot described in a deed from Timothy E. Sanders to Lucie Wing Couture dated November 13, 1996 and recorded in said Registry of Deeds in Book 12815, Page 292; thence,

| | |
|---|---|
| S 14°-52'-06" W | A distance of six hundred ninety and 23/100 (690.23') feet, along the easterly sideline of Presumpscot Street, to said "AREA OF UNKNOWN OWNERSHIP" and the Point of Beginning; thence, |
| S 61°-53'-41" E | A distance of two hundred forty one and 36/100 (241.36') feet along land formerly of Timothy E. Sanders to the westerly sideline of the Canadian National Railway Company easement or land; thence, |
| S 20°-42'-24" W | A distance of one hundred five and 93/100 (105.93') feet, along the westerly sideline of the Canadian National Railway Company easement or |

land, to a one inch iron pipe at the northeasterly corner of land now or formerly of Patrick and Victoria E. Miele; thence,

| | |
|---|---|
| N 62°-48'-28" W | A distance of two hundred thirty one and 24/100 (231.24') feet, along northerly sideline of said Miele land, to Presumpscot Street; thence, |
| N 25°–08'-05" E | A distance of nine and 75/100 (9.75') feet, along Presumpscot Street to an angle point on said Presumpscot Street; thence, |
| N 14°–52'-06" E | A distance of one hundred one and 70/100 (101.70') feet, along Presumpscot Street to the Point of Beginning. |

The above said metes and bounds contain a total area of 0.58 acres, or 25,203 square feet more or less.

TOGETHER WITH all right, title and interest in and to reversionary rights, if any, in and to said railroad right-of-way of that portion of the Grand Trunk Railroad lying adjacent to the above-described land, later the Canadian National Railway Company, SUBJECT TO said railroad right of way.

TOGETHER WITH all right, title and interest in and to the portion of Presumpscot Street lying adjacent to the above-described land.

IN WITNESS WHEREOF, the said 383 Presumpscot Street, Inc. has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Timothy E. Sanders, its President, this 26th day of March, 2001.

**383 PRESUMPSCOT STREET, INC.**, a Maine corporation

By: _____
Timothy E. Sanders
Its President

SEAL

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.

On March 26, 2001, personally appeared the above-named Timothy E. Sanders, President of said corporation in his said capacity, and acknowledged the foregoing to be his free act and deed and the free act and deed of said 383 Presumpscot Street, Inc.

Before me,

Notary Public
Printed Name: Janet D. Eustis

sanders.jfw.Release Deed Unknown Owners Parcel

SEAL

RECEIVED
RECORDED REGISTRY OF DEEDS
2001 MAR 28 PM 1:24
CUMBERLAND COUNTY
John B O'Brien

730

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services
Division of Health Engineering, Station 10
(207) 287-4672 FAX (207) 287-4172

## PROPERTY LOCATION

| | |
|---|---|
| City, Town, or Plantation | Portland |
| Street or Road | Presumpscot Street |
| Subdivision, Lot # | |

>> Caution: Permit Required – Attach in Space Below <<

The Subsurface Wastewater Disposal System ***shall not*** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

## OWNER/APPLICANT INFORMATION

| | |
|---|---|
| Name (last, first, MI) (Owner / Applicant) | Ostrer Corp |
| Mailing Address of ☐ Owner ■ Applicant | c/o Sewall Maher Sr. P.O. Box 854 |
| | Cumberland 04021 |
| Daytime Tel. # | 829-5016 |

Municipal Tax Map # _____ Lot # _____

### Owner or Applicant Statement

I state that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

Signature of Owner or Applicant _____ Date _____

### Caution: Inspections Required

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

Local Plumbing Inspector Signature _____ (1st) Date Approved _____ (2nd) Date Approved _____

## PERMIT INFORMATION

### TYPE OF APPLICATION

1. ☐ First Time System
2. ■ Replacement System
   Type Replaced: unk
   Year Installed: unk
3. ☐ Expanded System
   a. ☐ One-time exempted
   b. ☐ Non-exempted
4. ☐ Experimental System
5. ☐ Seasonal Conversion

### THIS APPLICATION REQUIRES

1. ■ No Rule Variance
2. ☐ First Time System Variance
   a. ☐ Local Plumbing Inspector Approval
   b. ☐ State & Local Plumbing Inspector Approval
3. Replacement System Variance
   a. ☐ Local Plumbing Inspector Approval
   b. ☐ State & Local Plumbing Inspector Approval
4. ☐ Minimum Lot Size Variance
5. ☐ Seasonal Conversion Approval

### DISPOSAL SYSTEM COMPONENT(S)

1. ■ Complete Non-engineered System
2. ☐ Primitive System (graywater & alt toilet)
3. ☐ Alternative Toilet, specify: _____
4. ☐ Non-Engineered Treatment Tank (only)
5. ☐ Holding Tank, _____ gallons
6. ☐ Non-engineered Disposal Field (only)
7. ☐ Separated Laundry System
8. ☐ Complete Engineered System (2000 gpd or more)
9. ☐ Engineered Treatment Tank (only)
10. ☐ Engineered Disposal Field (only)
11. ☐ Pre-treatment, specify:
12. ☐ Miscellaneous components

### SIZE OF PROPERTY

3.34 ■ acres ☐ sq. ft.

### SHORELAND ZONING

☐ Yes ■ No

### DISPOSAL SYSTEM TO SERVE

1. ☐ Single Family Dwelling Unit, No. of Bedrooms: _____
2. ☐ Multiple Family Dwelling, No. of Units: _____
3. ■ Other: Bus/train terminal
   SPECIFY

### TYPE OF WATER SUPPLY

1. ☐ Drilled Well 2. ☐ Dug Well 3. ☐ Private
4. ■ Public 5. ☐ Other:

## DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

### TREATMENT TANK

1. ■ Concrete
   a. ■ Regular
   b. ☐ Low Profile
2. ☐ Plastic
3. ☐ Other: _____

CAPACITY 2000 gallons

### DISPOSAL FIELD TYPE & SIZE

1. ☐ Stone Bed 2. ☐ Stone Trench
3. ■ Proprietary Device
   a. ☐ Cluster array c. ■ Linear
   b. ■ Regular load d. ☐ H-20 load
4. ☐ Other: _____

SIZE 2925 ■ sq. ft. ☐ lin. ft.

### GARBAGE DISPOSAL UNIT

1. ■ No 3. ☐ Maybe
2. ☐ Yes >> Specify one below:
   a. ☐ Multi-compartment Tank
   b. ☐ Tanks in Series
   c. ☐ Increase in Tank Capacity
   d. ☐ Filter on Tank Outlet

### DESIGN FLOW

545 gallons per day

BASED ON:

1. ■ Table 501.1 (dwelling unit(s)
2. ☐ Table 501.2 (other facilities)

SHOW CALCULATIONS – for other facilities –

100 passengers x 5gpd
3 employees x 15 gpd
545 gpd

3. ☐ Section 503.0 (meter readings)
   ATTACH WATER-METER DATA

### SOIL DATA & DESIGN CLASS

PROFILE CONDITION DESIGN

G / C / 1

at Observation Hole # HO1

Depth 15" Elevation _____"

OF MOST LIMITING SOIL FACTOR

### DISPOSAL FIELD SIZING

1. ☐ Small -- 2.0 sq. ft./gpd
2. ☐ Medium -- 2.6 sq. ft./gpd
3. ☐ Medium-Large -- 3.3 sq. ft./gpd
4. ☐ Large -- 4.1 sq. ft./gpd
5. ■ Extra Large -- 5.0 sq. ft./gpd

### PUMPING

1. ☐ Not Required
2. ■ May Be Required
3. ☐ Required >> Specify only for engineered or experimental systems:
   DOSE: _____ gallons

## SITE EVALUATOR STATEMENT

I Certify that on 6/18/01 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

Thomas D. Hampton — Site Evaluator Signature

263 — SE #

6/13/01 — Date

Thomas J. Hampton — Site Evaluator Name Printed

773-8650 — Telephone #

230

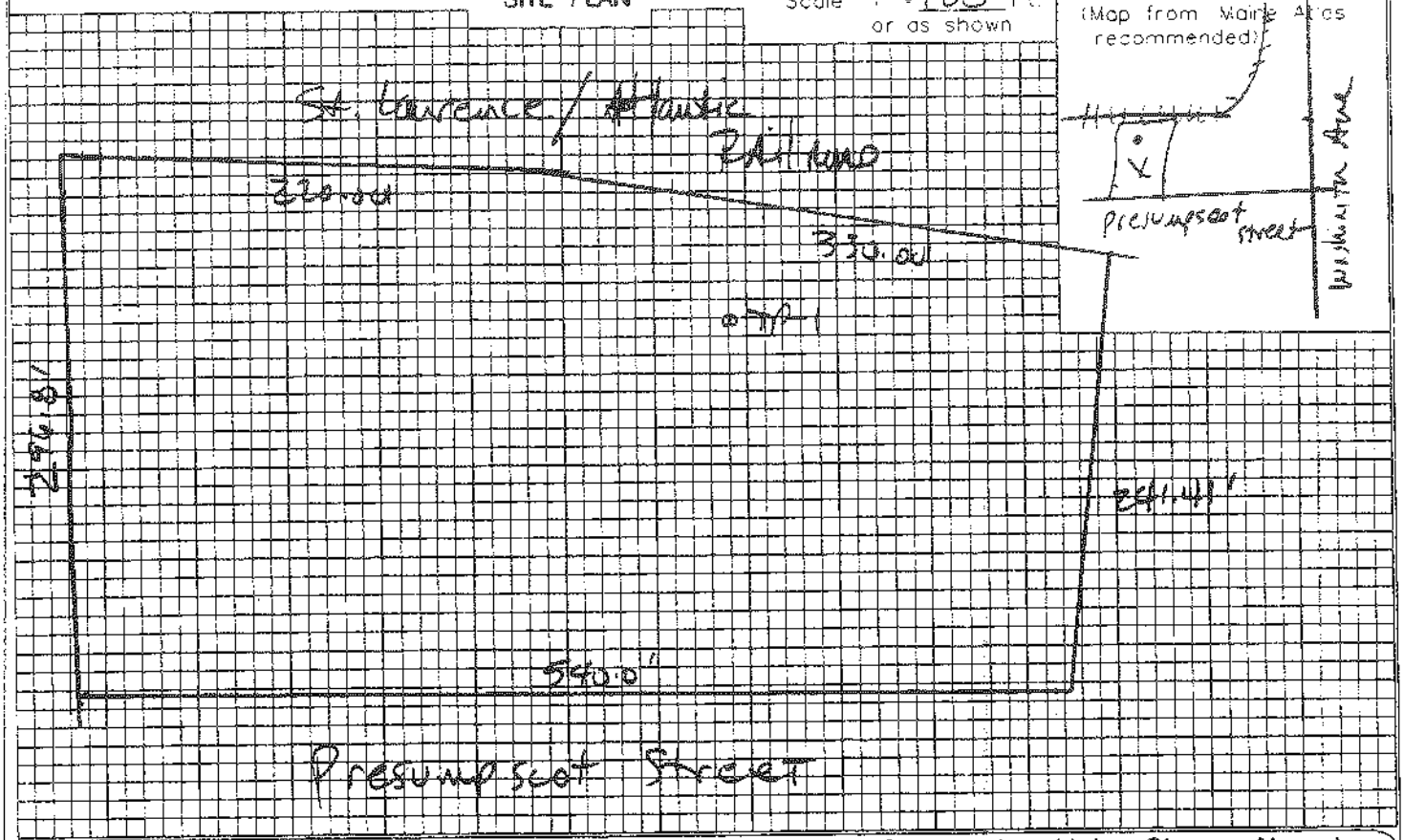
# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering
(207) 287-5672 FAX (207) 287-4172

Town, City, Plantation: Portland | Street, Road, Subdivision: Presumpscot Street | Owner's Name: Octoberclimb

## SITE PLAN

Scale 1" = 100 Ft. or as shown




## SITE LOCATION PLAN
(Map from Maine Atlas recommended)




## SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TP1 ■ Test Pit ☐ Boring
_____" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

| | Texture | Consistency | Color | Mottling |
|---|---|---|---|---|
| 0–10 | Silt Loam | Friable | Dark Brown | |
| 10–20 | Silt Loam | Friable | Brown | |
| 20–30 | Silty Clay Loam | Firm | Gray | Common Distinct |
| 30–40 | | | | |
| 40–50 | | | | |

| Soil Classification: Profile | Condition | Slope | Limiting Factor | |
|---|---|---|---|---|
| 9 | C | 0 % | 15" | ■ Ground Water ■ Restrictive Layer ☐ Bedrock ☐ Pit Depth |

Observation Hole _____ ☐ Test Pit ☐ Boring
_____" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

| | Texture | Consistency | Color | Mottling |
|---|---|---|---|---|
| 0–10 | | | | |
| 10–20 | | | | |
| 20–30 | | | | |
| 30–40 | | | | |
| 40–50 | | | | |

| Soil Classification: Profile | Condition | Slope | Limiting Factor | |
|---|---|---|---|---|
| | | % | " | ☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth |

Site Evaluator Signature: [signature] | SE # 763 | Date 6/19/01

730

# SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

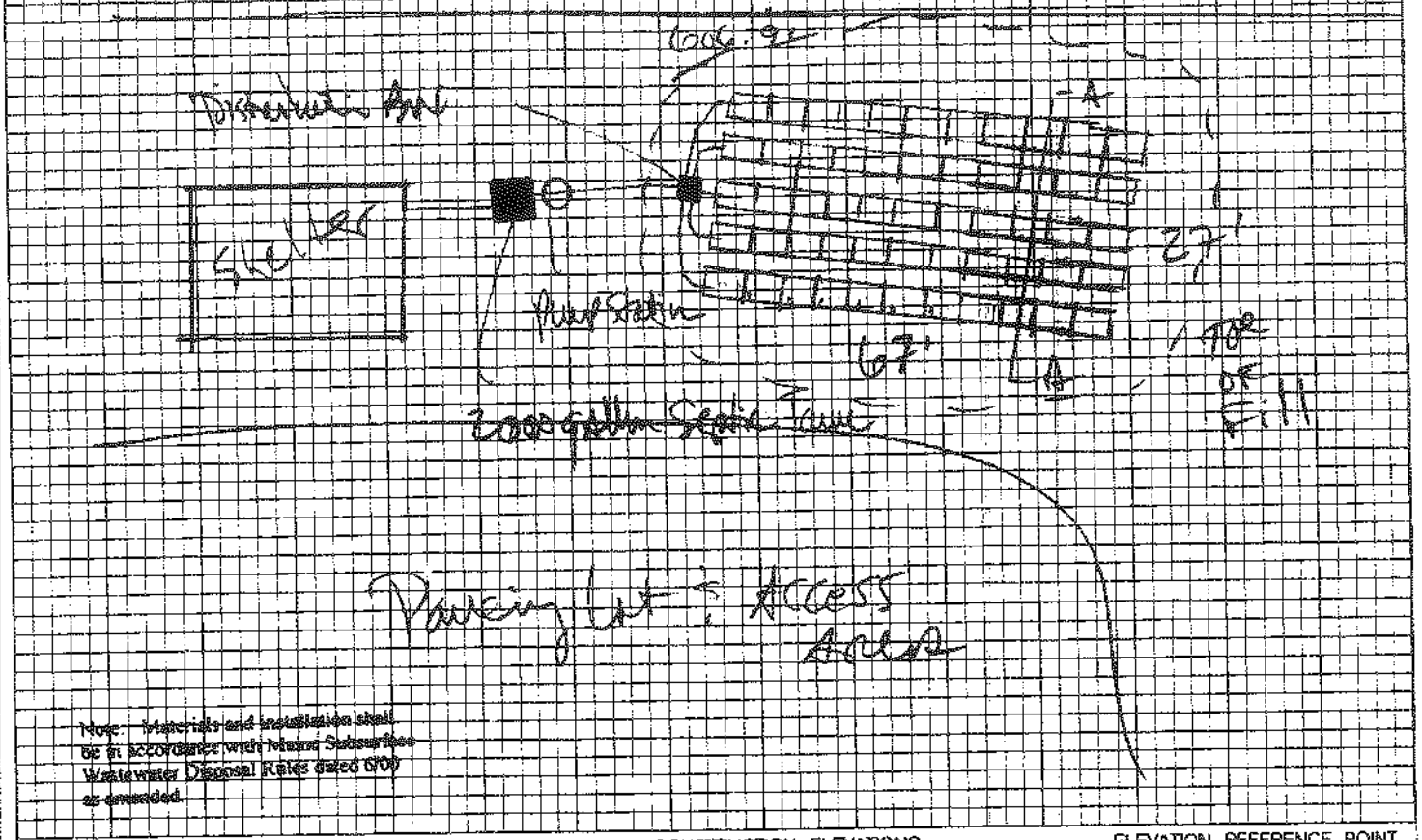
Department of Human Services
Division of Health Engineering
(207) 287-5672 FAX (207) 287-4172

Town, City, Plantation: Portland
Street, Road, Subdivision: Presumpscot Street
Owner's Name: October Corp

## SUBSURFACE WASTEWATER DISPOSAL PLAN

D/C Track

SCALE 1" = 30 FT




Note: Materials and installation shall be in accordance with Maine Subsurface Wastewater Disposal Rules dated 6/09 as amended.

### FILL REQUIREMENTS

Depth of Fill (Upslope): 22
Depth of Fill (Downslope): 22

### CONSTRUCTION ELEVATIONS

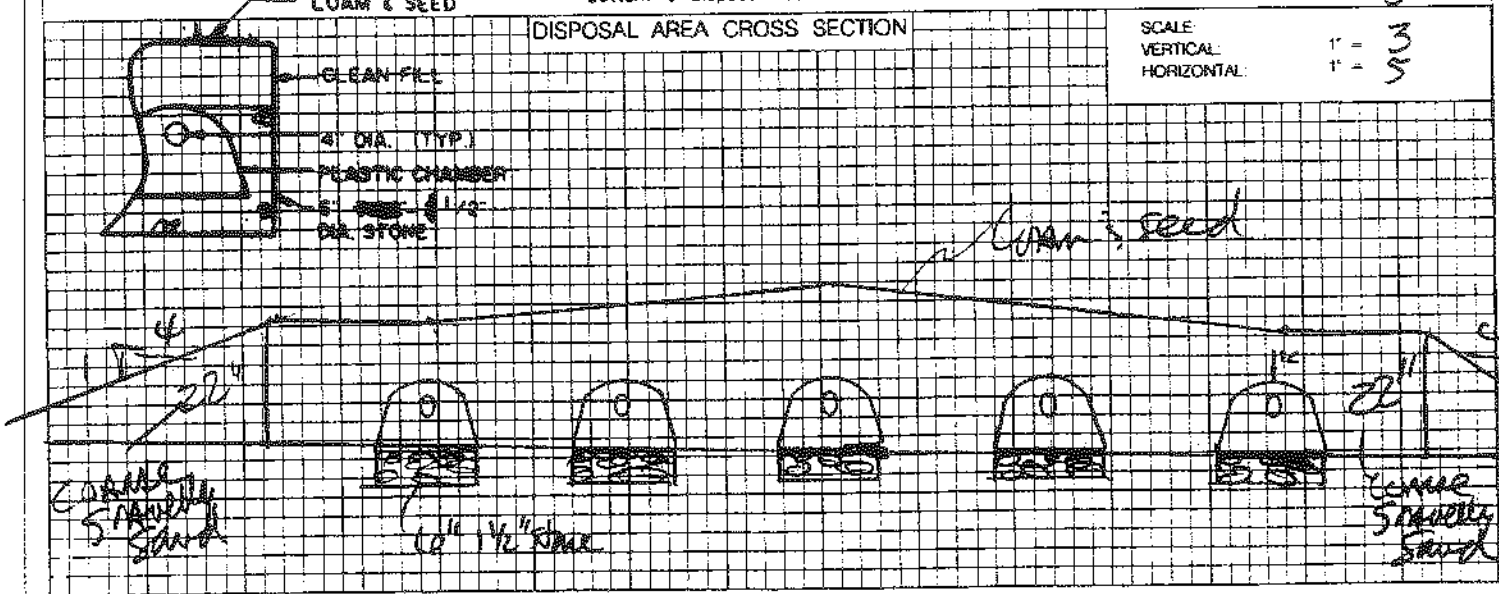
Finished Grade Elevation: _____
Top of Distribution Pipe or Proprietary Device: _____
Bottom of Disposal Area: _____

### ELEVATION REFERENCE POINT

Location & Description: rail 43" up 6" poplar
Reference Elevation: 0'

## DISPOSAL AREA CROSS SECTION

SCALE:
VERTICAL: 1" = 3
HORIZONTAL: 1" = 5




Site Evaluator Signature

SE #: 203

Date: 6/18/01

# STORMWATER MANAGEMENT PLAN
# 383 PRESUMPSCOT STREET
# PORTLAND, MAINE

**JUNE 2001**


*SME*

*Sevee & Maher Engineers, Inc.*
*Waste Management and Hydrogeologic Consultants*
*Cumberland Center, Maine*

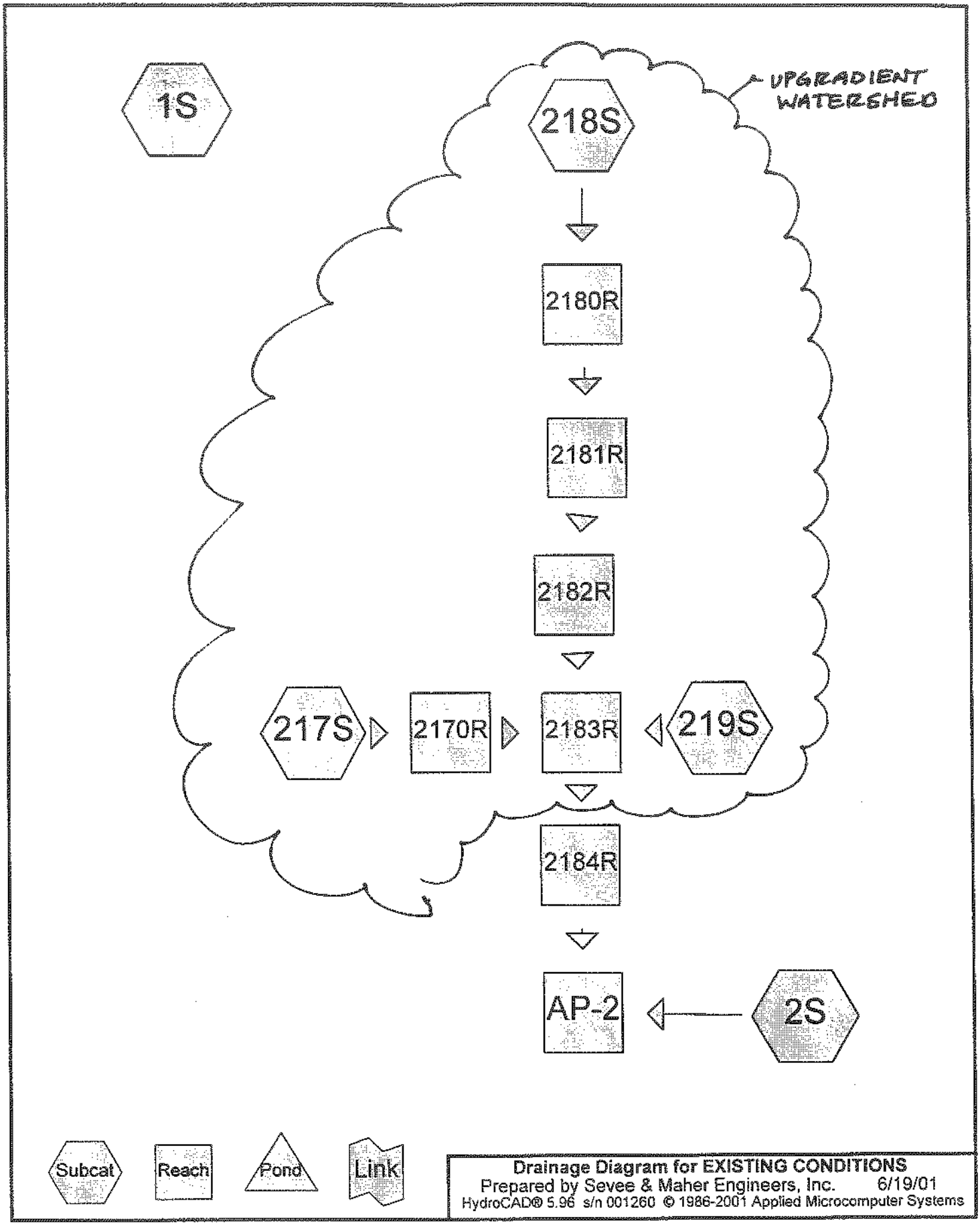
# TABLE OF CONTENTS



## LIST OF APPENDICES

# APPENDIX A

## STORMWATER MANAGEMENT
## EXISTING CONDITIONS ANALYSIS


1S
218S
UPGRADIENT WATERSHED
2180R
2181R
2182R
217S
2170R
2183R
219S
2184R
AP-2
2S
Subcat
Reach
Pond
Link
Drainage Diagram for EXISTING CONDITIONS
Prepared by Sevee & Maher Engineers, Inc. 6/19/01
HydroCAD® 5.96 s/n 001260 © 1986-2001 Applied Microcomputer Systems

## Subcatchment 1S: Subcatchment SC-1

Runoff = 2.24 cfs @ 12.20 hrs, Volume= 0.208 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 1.320 | 86 | Open Space (Poor, C) |
| 0.250 | 73 | Woods (C) |
| 0.070 | 89 | Gravel Drive |
| 0.030 | 98 | Impervious Roof |
| 0.020 | 98 | Impervious Pavement |
| 1.690 | 85 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.5 | 100 | 0.0300 | 0.1 | | **Sheet Flow, Segment A-B** Grass: Dense n= 0.240 P2= 3.00" |
| 3.8 | 250 | 0.0240 | 1.1 | | **Shallow Concentrated Flow, Segment B-C** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | | | | | **Direct Entry, Segment C-D** |
| 16.6 | 350 | Total | | | |

## Subcatchment 2S: SUBCATCHMENT SC-2

Runoff = 3.83 cfs @ 12.31 hrs, Volume= 0.417 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 2.280 | 86 | Open Space (Poor, C) |
| 0.440 | 73 | Woods (Fair, C) |
| 0.220 | 89 | Gravel Drive (C) |
| 0.200 | 98 | Impervious Pavement |
| 0.100 | 98 | Impervious Roof |
| 3.240 | 86 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.7 | 100 | 0.0200 | 0.1 | | **Sheet Flow, Segment A-B** Grass: Dense n= 0.240 P2= 3.00" |
| 2.5 | 140 | 0.0180 | 0.9 | | **Shallow Concentrated Flow, Segment B-C** Short Grass Pasture Kv= 7.0 fps |
| 2.8 | 120 | 0.0050 | 0.7 | | **Shallow Concentrated Flow, Segment C-D** Nearly Bare & Untilled Kv= 10.0 fps |
| 4.2 | 250 | 0.0200 | 1.0 | | **Shallow Concentrated Flow, Segment D-E** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 50 | 0.3000 | 2.7 | | **Shallow Concentrated Flow, Segment E-F** Woodland Kv= 5.0 fps |
| 0.7 | | | | | **Direct Entry, Segment F-G (STWC,135,0.022)** |
| 25.2 | 660 | Total | | | |

## Subcatchment 217S: Subcatchment SC-217

Runoff = 4.42 cfs @ 12.33 hrs, Volume= 0.504 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 6.490 | 70 | Woods (Good,C) |
| 1.530 | 74 | Open Space (Good,C) |
| 0.200 | 98 | Impervious Road |
| 0.100 | 98 | Impervious Roof |
| 8.320 | 72 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0500 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.8 | 500 | 0.1200 | 1.7 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 3.7 | | | | | **Direct Entry, Segment C-D (STWC,750,0.025)** |
| 23.9 | 600 | Total | | | |

## Subcatchment 218S: Subcatchment SC-218

Runoff = 4.65 cfs @ 12.34 hrs, Volume= 0.537 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 9.260 | 70 | Woods (Good,C) |
| 0.200 | 98 | Impervious Road |
| 9.460 | 71 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0500 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.8 | 500 | 0.1200 | 1.7 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 3.7 | | | | | **Direct Entry, Segment C-D (STWC,750,0.025)** |
| 23.9 | 600 | Total | | | |

## Subcatchment 219S: Subcatchment SC-219

Runoff = 38.67 cfs @ 12.24 hrs, Volume= 3.854 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 27.400 | 70 | Woods (Good,C) |
| 17.000 | 91 | Urban Industrial Area (C) |
| 0.400 | 98 | Impervious Road |
| 44.800 | 78 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.7 | 100 | 0.1000 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 5.0 | 450 | 0.0900 | 1.5 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 0.6 | 225 | 0.1000 | 6.4 | | **Shallow Concentrated Flow, Segment C-D** Paved Kv= 20.3 fps |
| 2.3 | | | | | **Direct Entry, Segment D-E (STWC,450,0.02)** |
| 19.6 | 775 | Total | | | |

## Reach 2170R: Reach From Route 9 to Presumpscot Street

Inflow = 4.42 cfs @ 12.33 hrs, Volume= 0.504 af
Outflow = 4.05 cfs @ 12.57 hrs, Volume= 0.495 af, Atten= 9%, Lag= 14.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.4 fps, Min. Travel Time= 7.7 min
Avg. Velocity = 1.6 fps, Avg. Travel Time= 17.2 min

Peak Depth= 0.29'
Capacity at bank full= 84.51 cfs
4.00' x 2.00' deep channel, n= 0.035 Length= 1,600.0' Slope= 0.0400 '/'
Side Slope Z-value= 0.3 '/'

## Reach 2180R: Reach From Route 9 to Parking Lot

Inflow = 4.65 cfs @ 12.34 hrs, Volume= 0.537 af
Outflow = 4.54 cfs @ 12.39 hrs, Volume= 0.535 af, Atten= 2%, Lag= 3.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 4.8 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 2.3 fps, Avg. Travel Time= 3.3 min

Peak Depth= 0.43'
Capacity at bank full= 59.33 cfs
2.00' x 2.00' deep channel, n= 0.035 Length= 450.0' Slope= 0.0600 '/'
Side Slope Z-value= 0.5 '/'

## Reach 2181R: Reach Parking Lot to CB

Inflow = 4.54 cfs @ 12.39 hrs, Volume= 0.535 af
Outflow = 4.51 cfs @ 12.41 hrs, Volume= 0.534 af, Atten= 1%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 6.2 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 2.7 fps, Avg. Travel Time= 1.5 min

Peak Depth= 0.15'
Capacity at bank full= 94.31 cfs
5.00' x 1.00' deep channel, n= 0.013 Length= 250.0' Slope= 0.0400 '/'
Side Slope Z-value= 0.1 '/'

## Reach 2182R: Reach CB to Presump St. Culvert

Inflow = 4.51 cfs @ 12.41 hrs, Volume= 0.534 af
Outflow = 4.41 cfs @ 12.45 hrs, Volume= 0.533 af, Atten= 2%, Lag= 2.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 8.5 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 4.5 fps, Avg. Travel Time= 2.6 min

Peak Depth= 0.51'
Capacity at bank full= 17.99 cfs
18.0" Diameter Pipe n= 0.012 Length= 700.0' Slope= 0.0250 '/'

## Reach 2183R: Culvert Accross Presumpscot Street

Inflow = 42.50 cfs @ 12.28 hrs, Volume= 4.882 af
Outflow = 42.46 cfs @ 12.28 hrs, Volume= 4.881 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 14.8 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 7.2 fps, Avg. Travel Time= 0.2 min

Peak Depth= 1.18'
Capacity at bank full= 172.33 cfs
42.0" Diameter Pipe n= 0.012 Length= 100.0' Slope= 0.0250 '/'

## Reach 2184R: Stream Reach Pres. St. to AP-2

Inflow = 42.46 cfs @ 12.28 hrs, Volume= 4.881 af
Outflow = 42.32 cfs @ 12.31 hrs, Volume= 4.875 af, Atten= 0%, Lag= 1.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 7.0 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 3.2 fps, Avg. Travel Time= 1.4 min

Peak Depth= 1.17'
Capacity at bank full= 415.56 cfs
4.00' x 4.00' deep channel, n= 0.035 Length= 265.0' Slope= 0.0350 '/'
Side Slope Z-value= 1.0 '/'

## Reach AP-2: (new node)

Inflow = 46.15 cfs @ 12.31 hrs, Volume= 5.291 af
Outflow = 46.15 cfs @ 12.31 hrs, Volume= 5.291 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

## Subcatchment 1S: Subcatchment SC-1

Runoff = 4.33 cfs @ 12.19 hrs, Volume= 0.408 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=4.70" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 1.320 | 86 | Open Space (Poor, C) |
| 0.250 | 73 | Woods (C) |
| 0.070 | 89 | Gravel Drive |
| 0.030 | 98 | Impervious Roof |
| 0.020 | 98 | Impervious Pavement |
| 1.690 | 85 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.5 | 100 | 0.0300 | 0.1 | | **Sheet Flow, Segment A-B** Grass: Dense n= 0.240 P2= 3.00" |
| 3.8 | 250 | 0.0240 | 1.1 | | **Shallow Concentrated Flow, Segment B-C** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | | | | | **Direct Entry, Segment C-D** |
| 16.6 | 350 | Total | | | |

## Subcatchment 2S: SUBCATCHMENT SC-2

Runoff = 7.29 cfs @ 12.30 hrs, Volume= 0.806 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=4.70" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 2.280 | 86 | Open Space (Poor, C) |
| 0.440 | 73 | Woods (Fair, C) |
| 0.220 | 89 | Gravel Drive (C) |
| 0.200 | 98 | Impervious Pavement |
| 0.100 | 98 | Impervious Roof |
| 3.240 | 86 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.7 | 100 | 0.0200 | 0.1 | | **Sheet Flow, Segment A-B** Grass: Dense n= 0.240 P2= 3.00" |
| 2.5 | 140 | 0.0180 | 0.9 | | **Shallow Concentrated Flow, Segment B-C** Short Grass Pasture Kv= 7.0 fps |
| 2.8 | 120 | 0.0050 | 0.7 | | **Shallow Concentrated Flow, Segment C-D** Nearly Bare & Untilled Kv= 10.0 fps |
| 4.2 | 250 | 0.0200 | 1.0 | | **Shallow Concentrated Flow, Segment D-E** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 50 | 0.3000 | 2.7 | | **Shallow Concentrated Flow, Segment E-F** Woodland Kv= 5.0 fps |
| 0.7 | | | | | **Direct Entry, Segment F-G (STWC,135,0.022)** |
| 25.2 | 660 | Total | | | |

## Subcatchment 217S: Subcatchment SC-217

Runoff = 11.69 cfs @ 12.31 hrs, Volume= 1.252 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=4.70" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 6.490 | 70 | Woods (Good,C) |
| 1.530 | 74 | Open Space (Good,C) |
| 0.200 | 98 | Impervious Road |
| 0.100 | 98 | Impervious Roof |
| 8.320 | 72 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0500 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.8 | 500 | 0.1200 | 1.7 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 3.7 | | | | | **Direct Entry, Segment C-D (STWC,750,0.025)** |
| 23.9 | 600 | Total | | | |

## Subcatchment 218S: Subcatchment SC-218

Runoff = 12.72 cfs @ 12.31 hrs, Volume= 1.366 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=4.70" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 9.260 | 70 | Woods (Good,C) |
| 0.200 | 98 | Impervious Road |
| 9.460 | 71 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0500 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.8 | 500 | 0.1200 | 1.7 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 3.7 | | | | | **Direct Entry, Segment C-D (STWC,750,0.025)** |
| 23.9 | 600 | Total | | | |

## Subcatchment 219S: Subcatchment SC-219

Runoff = 86.91 cfs @ 12.23 hrs, Volume= 8.515 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=4.70" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 27.400 | 70 | Woods (Good,C) |
| 17.000 | 91 | Urban Industrial Area (C) |
| 0.400 | 98 | Impervious Road |
| 44.800 | 78 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.7 | 100 | 0.1000 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 5.0 | 450 | 0.0900 | 1.5 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 0.6 | 225 | 0.1000 | 6.4 | | **Shallow Concentrated Flow, Segment C-D** Paved Kv= 20.3 fps |
| 2.3 | | | | | **Direct Entry, Segment D-E (STWC,450,0.02)** |
| 19.6 | 775 | Total | | | |

## Reach 2170R: Reach From Route 9 to Presumpscot Street

Inflow = 11.69 cfs @ 12.31 hrs, Volume= 1.252 af
Outflow = 11.16 cfs @ 12.47 hrs, Volume= 1.239 af, Atten= 5%, Lag= 9.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 4.9 fps, Min. Travel Time= 5.4 min
Avg. Velocity = 2.0 fps, Avg. Travel Time= 13.6 min

Peak Depth= 0.55'
Capacity at bank full= 84.51 cfs
4.00' x 2.00' deep channel, n= 0.035 Length= 1,600.0' Slope= 0.0400 '/'
Side Slope Z-value= 0.3 '/'

## Reach 2180R: Reach From Route 9 to Parking Lot

Inflow = 12.72 cfs @ 12.31 hrs, Volume= 1.366 af
Outflow = 12.55 cfs @ 12.34 hrs, Volume= 1.363 af, Atten= 1%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 6.6 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 2.9 fps, Avg. Travel Time= 2.6 min

Peak Depth= 0.80'
Capacity at bank full= 59.33 cfs
2.00' x 2.00' deep channel, n= 0.035 Length= 450.0' Slope= 0.0600 '/'
Side Slope Z-value= 0.5 '/'

## Reach 2181R: Reach Parking Lot to CB

Inflow = 12.55 cfs @ 12.34 hrs, Volume= 1.363 af
Outflow = 12.34 cfs @ 12.35 hrs, Volume= 1.362 af, Atten= 2%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 9.0 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 3.5 fps, Avg. Travel Time= 1.2 min

Peak Depth= 0.28'
Capacity at bank full= 94.31 cfs
5.00' x 1.00' deep channel, n= 0.013 Length= 250.0' Slope= 0.0400 '/'
Side Slope Z-value= 0.1 '/'

## Reach 2182R: Reach CB to Presump St. Culvert

Inflow = 12.34 cfs @ 12.35 hrs, Volume= 1.362 af
Outflow = 12.23 cfs @ 12.39 hrs, Volume= 1.360 af, Atten= 1%, Lag= 2.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 11.0 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 5.4 fps, Avg. Travel Time= 2.2 min

Peak Depth= 0.91'
Capacity at bank full= 17.99 cfs
18.0" Diameter Pipe n= 0.012 Length= 700.0' Slope= 0.0250 '/'

## Reach 2183R: Culvert Accross Presumpscot Street

Inflow = 102.10 cfs @ 12.26 hrs, Volume= 11.113 af
Outflow = 101.99 cfs @ 12.26 hrs, Volume= 11.112 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 18.6 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 8.5 fps, Avg. Travel Time= 0.2 min

Peak Depth= 1.94'
Capacity at bank full= 172.33 cfs
42.0" Diameter Pipe n= 0.012 Length= 100.0' Slope= 0.0250 '/'

## Reach 2184R: Stream Reach Pres. St. to AP-2

Inflow = 101.99 cfs @ 12.26 hrs, Volume= 11.112 af
Outflow = 101.57 cfs @ 12.28 hrs, Volume= 11.103 af, Atten= 0%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 9.0 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 3.8 fps, Avg. Travel Time= 1.2 min

Peak Depth= 1.92'
Capacity at bank full= 415.56 cfs
4.00' x 4.00' deep channel, n= 0.035 Length= 265.0' Slope= 0.0350 '/'
Side Slope Z-value= 1.0 '/'

## Reach AP-2: (new node)

Inflow = 108.84 cfs @ 12.29 hrs, Volume= 11.909 af
Outflow = 108.84 cfs @ 12.29 hrs, Volume= 11.909 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

## Subcatchment 1S: Subcatchment SC-1

Runoff = 5.33 cfs @ 12.19 hrs, Volume= 0.507 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 1.320 | 86 | Open Space (Poor, C) |
| 0.250 | 73 | Woods (C) |
| 0.070 | 89 | Gravel Drive |
| 0.030 | 98 | Impervious Roof |
| 0.020 | 98 | Impervious Pavement |
| 1.690 | 85 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.5 | 100 | 0.0300 | 0.1 | | **Sheet Flow, Segment A-B** Grass: Dense n= 0.240 P2= 3.00" |
| 3.8 | 250 | 0.0240 | 1.1 | | **Shallow Concentrated Flow, Segment B-C** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | | | | | **Direct Entry, Segment C-D** |
| 16.6 | 350 | Total | | | |

## Subcatchment 2S: SUBCATCHMENT SC-2

Runoff = 8.94 cfs @ 12.30 hrs, Volume= 0.997 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 2.280 | 86 | Open Space (Poor, C) |
| 0.440 | 73 | Woods (Fair, C) |
| 0.220 | 89 | Gravel Drive (C) |
| 0.200 | 98 | Impervious Pavement |
| 0.100 | 98 | Impervious Roof |
| 3.240 | 86 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.7 | 100 | 0.0200 | 0.1 | | **Sheet Flow, Segment A-B** Grass: Dense n= 0.240 P2= 3.00" |
| 2.5 | 140 | 0.0180 | 0.9 | | **Shallow Concentrated Flow, Segment B-C** Short Grass Pasture Kv= 7.0 fps |
| 2.8 | 120 | 0.0050 | 0.7 | | **Shallow Concentrated Flow, Segment C-D** Nearly Bare & Untilled Kv= 10.0 fps |
| 4.2 | 250 | 0.0200 | 1.0 | | **Shallow Concentrated Flow, Segment D-E** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | 50 | 0.3000 | 2.7 | | **Shallow Concentrated Flow, Segment E-F** Woodland Kv= 5.0 fps |
| 0.7 | | | | | **Direct Entry, Segment F-G (STWC,135,0.022)** |
| 25.2 | 660 | Total | | | |

## Subcatchment 217S: Subcatchment SC-217

Runoff = 15.53 cfs @ 12.30 hrs, Volume= 1.655 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 6.490 | 70 | Woods (Good,C) |
| 1.530 | 74 | Open Space (Good,C) |
| 0.200 | 98 | Impervious Road |
| 0.100 | 98 | Impervious Roof |
| 8.320 | 72 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0500 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.8 | 500 | 0.1200 | 1.7 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 3.7 | | | | | **Direct Entry, Segment C-D (STWC,750,0.025)** |
| 23.9 | 600 | Total | | | |

## Subcatchment 218S: Subcatchment SC-218

Runoff = 17.01 cfs @ 12.30 hrs, Volume= 1.815 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 9.260 | 70 | Woods (Good,C) |
| 0.200 | 98 | Impervious Road |
| 9.460 | 71 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0500 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.8 | 500 | 0.1200 | 1.7 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 3.7 | | | | | **Direct Entry, Segment C-D (STWC,750,0.025)** |
| 23.9 | 600 | Total | | | |

## Subcatchment 219S: Subcatchment SC-219

Runoff = 111.19 cfs @ 12.23 hrs, Volume= 10.917 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 27.400 | 70 | Woods (Good,C) |
| 17.000 | 91 | Urban Industrial Area (C) |
| 0.400 | 98 | Impervious Road |
| 44.800 | 78 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.7 | 100 | 0.1000 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 5.0 | 450 | 0.0900 | 1.5 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 0.6 | 225 | 0.1000 | 6.4 | | **Shallow Concentrated Flow, Segment C-D** Paved Kv= 20.3 fps |
| 2.3 | | | | | **Direct Entry, Segment D-E (STWC,450,0.02)** |
| 19.6 | 775 | Total | | | |

## Reach 2170R: Reach From Route 9 to Presumpscot Street

Inflow = 15.53 cfs @ 12.30 hrs, Volume= 1.655 af
Outflow = 14.95 cfs @ 12.44 hrs, Volume= 1.640 af, Atten= 4%, Lag= 8.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 5.4 fps, Min. Travel Time= 4.9 min
Avg. Velocity = 2.1 fps, Avg. Travel Time= 12.6 min

Peak Depth= 0.66'
Capacity at bank full= 84.51 cfs
4.00' x 2.00' deep channel, n= 0.035 Length= 1,600.0' Slope= 0.0400 '/'
Side Slope Z-value= 0.3 '/'

## Reach 2180R: Reach From Route 9 to Parking Lot

Inflow = 17.01 cfs @ 12.30 hrs, Volume= 1.815 af
Outflow = 16.81 cfs @ 12.33 hrs, Volume= 1.812 af, Atten= 1%, Lag= 1.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 7.2 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 3.1 fps, Avg. Travel Time= 2.4 min

Peak Depth= 0.96'
Capacity at bank full= 59.33 cfs
2.00' x 2.00' deep channel, n= 0.035 Length= 450.0' Slope= 0.0600 '/'
Side Slope Z-value= 0.5 '/'

## Reach 2181R: Reach Parking Lot to CB

Inflow = 16.81 cfs @ 12.33 hrs, Volume= 1.812 af
Outflow = 16.71 cfs @ 12.34 hrs, Volume= 1.810 af, Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 10.1 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.8 fps, Avg. Travel Time= 1.1 min

Peak Depth= 0.33'
Capacity at bank full= 94.31 cfs
5.00' x 1.00' deep channel, n= 0.013 Length= 250.0' Slope= 0.0400 '/'
Side Slope Z-value= 0.1 '/'

## Reach 2182R: Reach CB to Presump St. Culvert

Inflow = 16.71 cfs @ 12.34 hrs, Volume= 1.810 af
Outflow = 16.37 cfs @ 12.38 hrs, Volume= 1.808 af, Atten= 2%, Lag= 2.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 11.5 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 5.7 fps, Avg. Travel Time= 2.0 min

Peak Depth= 1.13'
Capacity at bank full= 17.99 cfs
18.0" Diameter Pipe n= 0.012 Length= 700.0' Slope= 0.0250 '/'

## Reach 2183R: Culvert Accross Presumpscot Street

Inflow = 132.62 cfs @ 12.25 hrs, Volume= 14.364 af
Outflow = 132.48 cfs @ 12.26 hrs, Volume= 14.363 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 19.7 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 8.9 fps, Avg. Travel Time= 0.2 min

Peak Depth= 2.30'
Capacity at bank full= 172.33 cfs
42.0" Diameter Pipe n= 0.012 Length= 100.0' Slope= 0.0250 '/'

## Reach 2184R: Stream Reach Pres. St. to AP-2

Inflow = 132.48 cfs @ 12.26 hrs, Volume= 14.363 af
Outflow = 131.89 cfs @ 12.28 hrs, Volume= 14.353 af, Atten= 0%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 9.6 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 4.0 fps, Avg. Travel Time= 1.1 min

Peak Depth= 2.21'
Capacity at bank full= 415.56 cfs
4.00' x 4.00' deep channel, n= 0.035 Length= 265.0' Slope= 0.0350 '/'
Side Slope Z-value= 1.0 '/'

## Reach AP-2: (new node)

Inflow = 140.80 cfs @ 12.28 hrs, Volume= 15.350 af
Outflow = 140.80 cfs @ 12.28 hrs, Volume= 15.350 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

## HYDROCAD WORKSHEET - EXISTING CONDITIONS

## TIME OF CONCENTRATION ($T_c$) - DIRECT ENTRY

**SUBCATCHMENT** **SC-1**

| | CHANNEL FLOW | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | C - D | | | |
| 1 | SURFACE DESCRIPTION | GWW | | | |
| 2 | FLOW LENGTH, L (ft) | 80 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.088 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 4.2 | | | |
| 5 | $T_t$ = L/60 V, (min) | 0.3 | | | |

| TOTAL $T_t$, (min) | 0.3 |
|---|---|

**SUBCATCHMENT** **SC-2**

| | CHANNEL FLOW | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | FG | | | |
| 1 | SURFACE DESCRIPTION | STWC | | | |
| 2 | FLOW LENGTH, L (ft) | 135 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.022 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 3.1 | | | |
| 5 | $T_t$ = L/60 V, (min) | 0.7 | | | |

| TOTAL $T_t$, (min) | 0.7 |
|---|---|

**SUBCATCHMENT** **SC-217**

| | CHANNEL FLOW | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | C - D | | | |
| 1 | SURFACE DESCRIPTION | STWC | | | |
| 2 | FLOW LENGTH, L (ft) | 750 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.025 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 3.4 | | | |
| 5 | $T_t$ = L/60 V, (min) | 3.7 | | | |

| TOTAL $T_t$, (min) | 3.7 |
|---|---|

**SUBCATCHMENT** **SC-218**

CHANNEL FLOW

| | | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | C-D | | | |
| 1 | SURFACE DESCRIPTION | STWC | | | |
| 2 | FLOW LENGTH, L (ft) | 750 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.025 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 3.4 | | | |
| 5 | $T_t$ = L/60 V, (min) | 3.7 | | | |

| TOTAL $T_t$, (min) | 3.7 |
|---|---|

**SUBCATCHMENT** **SC-219**

CHANNEL FLOW

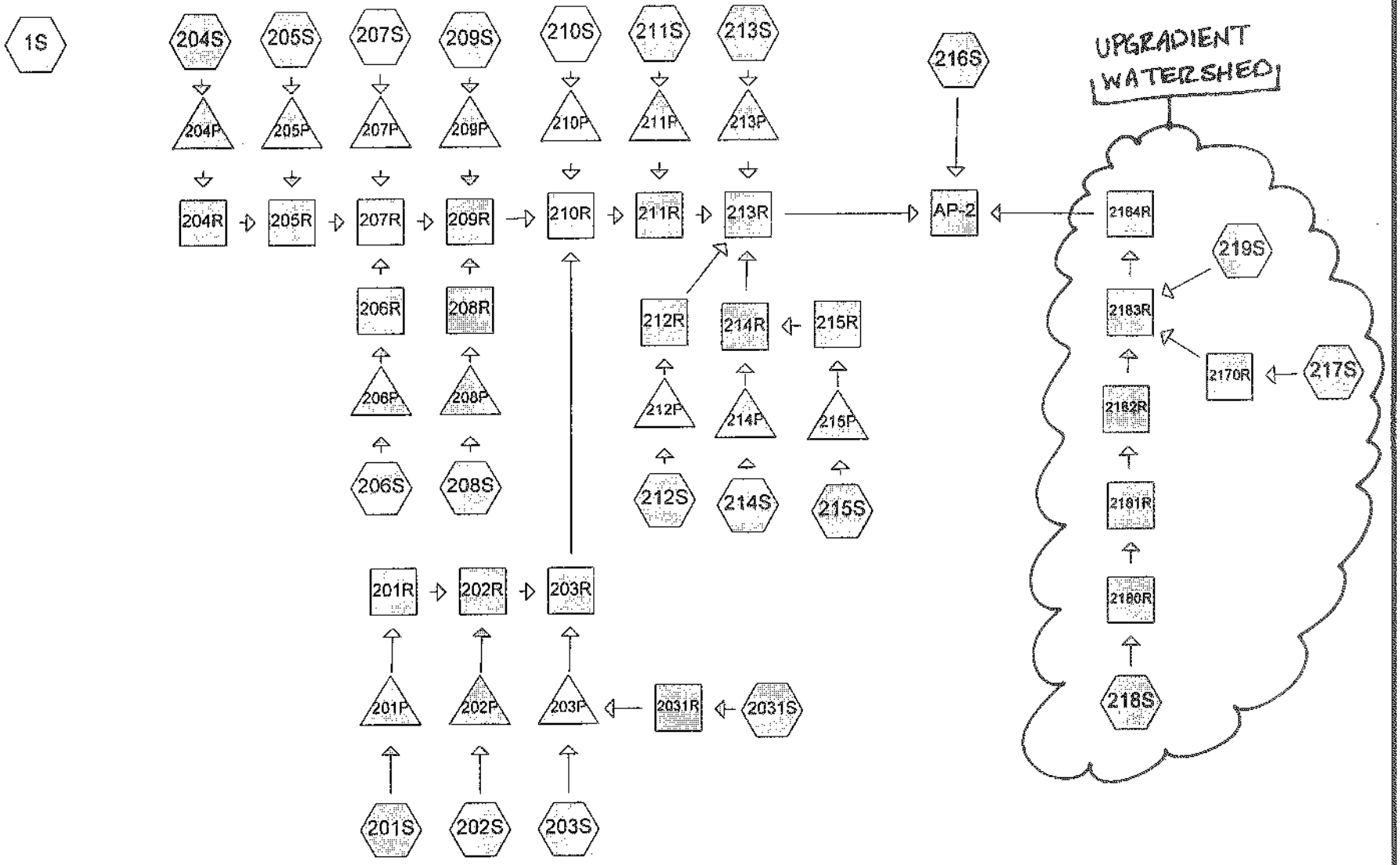
| | | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | D - E | | | |
| 1 | SURFACE DESCRIPTION | STWC | | | |
| 2 | FLOW LENGTH, L (ft) | 450 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.02 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 3.2 | | | |
| 5 | $T_t$ = L/60 V, (min) | 2.3 | | | |

| TOTAL $T_t$, (min) | 2.3 |
|---|---|

APPENDIX B

STORMWATER MANAGEMENT
POST-DEVELOPMENT ANALYSIS

STORM DRAIN PIPE SIZING




**Drainage Diagram for PROPOSED CONDITIONS**
Prepared by Sevee & Maher Engineers, Inc. 6/20/01

## Subcatchment 1S: SUBCATCHMENT SC-1

$Q_2 = 0.8$ cfs
$Q_{10} = 1.93$ cfs

Runoff = 2.51 cfs @ 12.19 hrs, Volume= 0.232 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.250 | 73 | WOODS (FAIR, C) |
| 0.070 | 89 | GRAVEL RR ROW C |
| 0.030 | 98 | Impervious Roof |
| 0.700 | 74 | Open Space (Good, C) |
| 1.050 | 75 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.5 | 110 | 0.0300 | 0.1 | | **Sheet Flow, Segment A-B** Grass: Dense n= 0.240 P2= 3.00" |
| 2.7 | 200 | 0.0300 | 1.2 | | **Shallow Concentrated Flow, Segment B-C** Short Grass Pasture Kv= 7.0 fps |
| 0.3 | | | | | **Direct Entry, Segment C-D (GWW,80,0.075)** |
| 16.5 | 310 | Total | | | |

## Subcatchment 201S: Subcatchment SC-201

$Q_2 = 0.72$ cfs
$Q_{10} = 1.17$ cfs

Runoff = 1.39 cfs @ 11.99 hrs; Volume= 0.102 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.230 | 98 | Impervious Pavement |
| 0.030 | 74 | Open Space (good, C) |
| 0.260 | 95 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.6 | 95 | 0.0100 | 1.0 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.5 | 57 | 0.0100 | 2.0 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 2.1 | 152 | Total | | | |

1/21

## Subcatchment 202S: Subcatchment SC-202

$R_2 = 0.78$ cfs

Runoff = 1.60 cfs @ 11.99 hrs, Volume= 0.113 af

$R_{10} = 1.34$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.220 | 98 | Impervious Pavement |
| 0.100 | 74 | Open Areas (Good, C) |
| 0.320 | 91 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.5 | 130 | 0.0200 | 1.4 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.2 | 25 | 0.0100 | 2.0 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 1.7 | 155 | Total | | | |

## Subcatchment 203S: Subcatchment SC-203

$R_2 = 0.57$ cfs

Runoff = 1.05 cfs @ 11.98 hrs, Volume= 0.084 af

$R_{10} = 0.90$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.200 | 98 | Impervious Pavement |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.9 | 65 | 0.0200 | 1.2 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.2 | 30 | 0.0100 | 2.0 | | **Shallow Concentrated Flow, Segment C-D** Paved Kv= 20.3 fps |
| 1.1 | 95 | Total | | | |

## Subcatchment 204S: Subcatchment SC-204

$R_2 = 0.41$ cfs

Runoff = 0.76 cfs @ 11.99 hrs, Volume= 0.059 af

$R_{10} = 0.65$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.140 | 98 | Impervious Roof and Pavement |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.3 | 10 | 0.0100 | 0.6 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 2.0 | 155 | 0.0040 | 1.3 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 2.3 | 165 | Total | | | |

## Subcatchment 205S: Subcatchment SC-205

$R_2 = 0.34$ cfs

$R_{10} = 0.55$ cfs

Runoff = 0.65 cfs @ 11.99 hrs, Volume= 0.048 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.110 | 98 | Impervious Pavement |
| 0.010 | 74 | Open Areas (Good, C) |
| 0.120 | 96 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.3 | 10 | 0.0100 | 0.6 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 1.8 | 135 | 0.0040 | 1.3 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 2.1 | 145 | Total | | | |

## Subcatchment 206S: Subcatchment SC-206

$R_2 = 0.29$ cfs

$R_{10} = 0.49$ cfs

Runoff = 0.59 cfs @ 11.98 hrs, Volume= 0.044 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.090 | 98 | Impervious Pavement |
| 0.030 | 74 | Open Space (Good, C) |
| 0.120 | 92 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.6 | 34 | 0.0150 | 1.0 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.2 | 33 | 0.0150 | 2.5 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 0.8 | 67 | Total | | | |

## Subcatchment 207S: Subcatchment SC-207

$R_2 = 0.27$ cfs

$R_{10} = 0.44$ cfs

Runoff = 0.52 cfs @ 11.98 hrs, Volume= 0.040 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.090 | 98 | Impervious Pavement |
| 0.010 | 74 | Open Space (Good, C) |
| 0.100 | 96 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.5 | 35 | 0.0300 | 1.3 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.5 | 80 | 0.0150 | 2.5 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 1.0 | 115 | Total | | | |

3/8?

## Subcatchment 208S: Subcatchment SC-208

Runoff = 0.49 cfs @ 11.98 hrs, Volume= 0.037 af

$R_2 = 0.25$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

$R_{10} = 042$ cfs

| Area (ac) | CN | Description |
|---|---|---|
| 0.080 | 98 | Impervious Pavement |
| 0.020 | 74 | Open Space (Good, C) |
| 0.100 | 93 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.5 | 30 | 0.0200 | 1.0 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.3 | 38 | 0.0150 | 2.5 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 0.8 | 68 | Total | | | |

## Subcatchment 209S: Subcatchment SC-209

$R_2 = 0.29$ cfs

Runoff = 0.56 cfs @ 11.98 hrs, Volume= 0.042 af

$R_{10} = 0.47$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.090 | 98 | Impervious Pavement |
| 0.020 | 74 | Open Ares (Good, C) |
| 0.110 | 94 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.5 | 35 | 0.0300 | 1.3 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.6 | 85 | 0.0150 | 2.5 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 1.1 | 120 | Total | | | |

## Subcatchment 210S: Subcatchment SC-210

$R_2 = 0.24$ cfs

Runoff = 0.46 cfs @ 11.98 hrs, Volume= 0.035 af

$R_{10} = 0.39$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.080 | 98 | Impervious Pavement |
| 0.010 | 74 | Open Area (Good, C) |
| 0.090 | 95 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.5 | 43 | 0.0300 | 1.3 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.4 | 70 | 0.0200 | 2.9 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 0.9 | 113 | Total | | | |

4/2

## Subcatchment 211S: Subcatchment SC-211

Runoff = 0.57 cfs @ 11.98 hrs, Volume= 0.041 af

$R_2 = 0.27$ cfs

$R_{10} = 0.48$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.080 | 98 | Impervious Pavement |
| 0.040 | 74 | Open Space (Good, C) |
| 0.120 | 90 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.5 | 43 | 0.0300 | 1.3 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.4 | 75 | 0.0200 | 2.9 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 0.9 | 118 | Total | | | |

## Subcatchment 212S: Subcatchment SC-212

Runoff = 0.45 cfs @ 11.97 hrs, Volume= 0.035 af

$R_2 = 0.24$ cfs

$R_{10} = 0.38$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.080 | 98 | Impervious Pavement |
| 0.010 | 74 | Open Space (Good, C) |
| 0.090 | 95 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.5 | 43 | 0.0300 | 1.3 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.2 | 43 | 0.0300 | 3.5 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 0.7 | 86 | Total | | | |

## Subcatchment 213S: Subcatchment SC-213

Runoff = 0.68 cfs @ 11.98 hrs, Volume= 0.050 af

$R_2 = 0.33$ cfs

$R_{10} = 0.57$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.100 | 98 | Impervious Pavement |
| 0.040 | 74 | Open Space (Good, C) |
| 0.140 | 91 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.5 | 43 | 0.0300 | 1.3 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.5 | 80 | 0.0200 | 2.9 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 1.0 | 123 | Total | | | |

## Subcatchment 214S: Subcatchment SC-214

$R_2 = 0.95$ cfs

$R_{10} = 1.73$ cfs

Runoff = 2.10 cfs @ 12.00 hrs, Volume= 0.144 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.260 | 98 | Impervious Pavement |
| 0.180 | 74 | Open Space (Good, C) |
| 0.440 | 88 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.5 | 20 | 0.0100 | 0.7 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 1.7 | 300 | 0.0200 | 2.9 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 1.0 | | | | | **Direct Entry, Segment C-D (PA,170,0.02)** |
| 3.2 | 320 | Total | | | |

## Subcatchment 215S: Subcatchment SC-215

$R_2 = 0.40$ cfs

$R_{10} = 0.62$ cfs

Runoff = 0.73 cfs @ 11.98 hrs, Volume= 0.059 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.140 | 98 | Impervious Pavement |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 0.4 | 25 | 0.0200 | 1.0 | | **Sheet Flow, Segment A-B** Smooth surfaces n= 0.011 P2= 3.00" |
| 0.6 | 115 | 0.0220 | 3.0 | | **Shallow Concentrated Flow, Segment B-C** Paved Kv= 20.3 fps |
| 1.0 | 140 | Total | | | |

## Subcatchment 216S: Subcatchment SC-216

$R_2 = 0.75$ cfs

$R_{10} = 1.80$ cfs

Runoff = 2.35 cfs @ 12.27 hrs, Volume= 0.245 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.710 | 74 | Open Space (Good, C) |
| 0.310 | 73 | Woods (Fair,C) |
| 0.050 | 89 | RR Gravel ROW C |
| 0.040 | 98 | Impervious Roofs |
| 1.110 | 75 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.7 | 95 | 0.0100 | 0.1 | | **Sheet Flow, Segment A-B** Grass: Dense n= 0.240 P2= 3.00" |
| 3.7 | | | | | **Direct Entry, Segment B-C (GWW,220,0.005)** |
| 0.1 | | | | | **Direct Entry, Segment C-D (STWC,75,0.24)** |
| 22.5 | 95 | Total | | | |

## Subcatchment 217S: Subcatchment SC-217

$R_2 = 4.42$ cfs

Runoff = 15.53 cfs @ 12.30 hrs, Volume= 1.655 af

$R_{10}$ 11.69 cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 6.490 | 70 | Woods (Good,C) |
| 1.530 | 74 | Open Space (Good,C) |
| 0.200 | 98 | Impervious Road |
| 0.100 | 98 | Impervious Roof |
| 8.320 | 72 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0500 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.8 | 500 | 0.1200 | 1.7 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 3.7 | | | | | **Direct Entry, Segment C-D (STWC,750,0.025)** |
| 23.9 | 600 | Total | | | |

## Subcatchment 218S: Subcatchment SC-218

$R_2 = 4.65$ cfs

Runoff = 17.01 cfs @ 12.30 hrs, Volume= 1.815 af

$R_{10} = 12.72$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 9.260 | 70 | Woods (Good,C) |
| 0.200 | 98 | Impervious Road |
| 9.460 | 71 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.4 | 100 | 0.0500 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 4.8 | 500 | 0.1200 | 1.7 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 3.7 | | | | | **Direct Entry, Segment C-D (STWC,750,0.025)** |
| 23.9 | 600 | Total | | | |

## Subcatchment 219S: Subcatchment SC-219

Runoff = 111.19 cfs @ 12.23 hrs, Volume= 10.917 af

$Q_2 = 38.67$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

$Q_{10} = 86.91$ cfs

| Area (ac) | CN | Description |
|---|---|---|
| 27.400 | 70 | Woods (Good,C) |
| 17.000 | 91 | Urban Industrial Area (C) |
| 0.400 | 98 | Impervious Road |
| 44.800 | 78 | Weighted Average |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.7 | 100 | 0.1000 | 0.1 | | **Sheet Flow, Segment A-B** Woods: Light underbrush n= 0.400 P2= 3.00" |
| 5.0 | 450 | 0.0900 | 1.5 | | **Shallow Concentrated Flow, Segment B-C** Woodland Kv= 5.0 fps |
| 0.6 | 225 | 0.1000 | 6.4 | | **Shallow Concentrated Flow, Segment C-D** Paved Kv= 20.3 fps |
| 2.3 | | | | | **Direct Entry, Segment D-E (STWC,450,0.02)** |
| 19.6 | 775 | Total | | | |

## Subcatchment 2031S: Subcatchment SC-2031

$Q_2 = 0.20$ cfs

Runoff = 0.66 cfs @ 12.16 hrs, Volume= 0.060 af

$Q_{10} = 0.51$ cfs

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50" (AMC=2)

| Area (ac) | CN | Description |
|---|---|---|
| 0.280 | 74 | Open Space (Good, C) |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.5 | 120 | 0.0300 | 0.1 | | **Sheet Flow, Segment A-B** Grass: Dense n= 0.240 P2= 3.00" |

## Reach 201R: Storm Drain Pipe P-201

Inflow = 1.38 cfs @ 11.99 hrs, Volume= 0.102 af
Outflow = 1.35 cfs @ 12.00 hrs, Volume= 0.101 af, Atten= 3%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.5 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.2 fps, Avg. Travel Time= 0.7 min

$Q_2 = 0.72$ cfs

$Q_{10} = 1.17$ cfs

Peak Depth= 0.50'
Capacity at bank full= 2.73 cfs
12.0" Diameter Pipe n= 0.012 Length= 50.0' Slope= 0.0050 '/'

8/21

## Reach 202R: Storm Drain Pipe P-202

Inflow = 2.95 cfs @ 11.99 hrs, Volume= 0.215 af
Outflow = 2.86 cfs @ 12.00 hrs, Volume= 0.215 af, Atten= 3%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 4.3 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.6 fps, Avg. Travel Time= 0.7 min

$Q_2 = 1.47$ cfs
$Q_{10} = 2.48$ cfs

Peak Depth= 0.80'
Capacity at bank full= 2.99 cfs
12.0" Diameter Pipe n= 0.012 Length= 70.0' Slope= 0.0060 '/'

## Reach 203R: Storm Drain Pipe P-203

Inflow = 4.15 cfs @ 12.00 hrs, Volume= 0.358 af
Outflow = 3.95 cfs @ 12.01 hrs, Volume= 0.358 af, Atten= 5%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 5.2 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.8 fps, Avg. Travel Time= 1.6 min

$Q_2 = 2.04$ cfs
$Q_{10} = 3.47$ cfs

Peak Depth= 0.77'
Capacity at bank full= 5.86 cfs
15.0" Diameter Pipe n= 0.012 Length= 180.0' Slope= 0.0070 '/'

## Reach 204R: Storm Drain P-204

Inflow = 0.76 cfs @ 11.99 hrs, Volume= 0.059 af
Outflow = 0.75 cfs @ 12.00 hrs, Volume= 0.059 af, Atten= 1%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.5 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.2 fps, Avg. Travel Time= 0.3 min

$Q_2 = 0.41$ cfs
$Q_{10} = 0.65$ cfs

Peak Depth= 0.32'
Capacity at bank full= 3.45 cfs
12.0" Diameter Pipe n= 0.012 Length= 25.0' Slope= 0.0080 '/'

## Reach 205R: Storm Drain Pipe P-205

Inflow = 1.40 cfs @ 11.99 hrs, Volume= 0.107 af
Outflow = 1.38 cfs @ 12.00 hrs, Volume= 0.107 af, Atten= 1%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.5 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.2 fps, Avg. Travel Time= 0.3 min

$Q_2 = 0.74$ cfs
$Q_{10} = 1.19$ cfs

Peak Depth= 0.50'
Capacity at bank full= 2.78 cfs
12.0" Diameter Pipe n= 0.012 Length= 25.0' Slope= 0.0052 '/'

9/21

## Reach 206R: Storm Drain Pipe P-206

Inflow = 0.59 cfs @ 11.98 hrs, Volume= 0.044 af
Outflow = 0.58 cfs @ 11.98 hrs, Volume= 0.044 af, Atten= 1%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.8 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.3 fps, Avg. Travel Time= 0.8 min

$R_2 = 0.29$ cfs

$R_{10} = 0.49$ cfs

Peak Depth= 0.25'
Capacity at bank full= 4.23 cfs
12.0" Diameter Pipe n= 0.012 Length= 60.0' Slope= 0.0120 '/'

## Reach 207R: Storm Drain Pipe P-207

Inflow = 2.47 cfs @ 11.99 hrs, Volume= 0.190 af
Outflow = 2.42 cfs @ 11.99 hrs, Volume= 0.190 af, Atten= 2%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 4.0 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.4 fps, Avg. Travel Time= 0.6 min

$R_2 = 1.29$ cfs

$R_{10} = 2.09$ cfs

Peak Depth= 0.73'
Capacity at bank full= 2.75 cfs
12.0" Diameter Pipe n= 0.012 Length= 55.0' Slope= 0.0051 '/'

## Reach 208R: Storm Drain Pipe P-208

Inflow = 0.49 cfs @ 11.98 hrs, Volume= 0.037 af
Outflow = 0.49 cfs @ 11.98 hrs, Volume= 0.037 af, Atten= 1%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.6 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.2 fps, Avg. Travel Time= 0.8 min

$R_2 = 0.25$ cfs

$R_{10} = 0.42$ cfs

Peak Depth= 0.23'
Capacity at bank full= 4.23 cfs
12.0" Diameter Pipe n= 0.012 Length= 60.0' Slope= 0.0120 '/'

## Reach 209R: Storm Drain Pipe P-209

Inflow = 3.46 cfs @ 11.99 hrs, Volume= 0.269 af
Outflow = 3.45 cfs @ 11.99 hrs, Volume= 0.269 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 5.6 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.0 fps, Avg. Travel Time= 0.1 min

$R_2 = 1.79$ cfs

$R_{10} = 2.93$ cfs

Peak Depth= 0.74'
Capacity at bank full= 3.86 cfs
12.0" Diameter Pipe n= 0.012 Length= 15.0' Slope= 0.0100 '/'

10/21

## Reach 210R: Storm Drain Pipe P-210

Inflow = 7.83 cfs @ 12.00 hrs, Volume= 0.662 af
Outflow = 7.75 cfs @ 12.00 hrs, Volume= 0.662 af, Atten= 1%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 7.4 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.8 fps, Avg. Travel Time= 0.3 min

$R_2 = 3.92$ cfs
$R_{10} = 6.57$ cfs

Peak Depth= 1.00'
Capacity at bank full= 8.01 cfs
15.0" Diameter Pipe n= 0.012 Length= 55.0' Slope= 0.0131 '/'

## Reach 211R: Storm Drain Pipe P-211

Inflow = 8.31 cfs @ 12.00 hrs, Volume= 0.704 af
Outflow = 8.09 cfs @ 12.01 hrs, Volume= 0.703 af, Atten= 3%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 5.7 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.1 fps, Avg. Travel Time= 0.9 min

$R_2 = 4.14$ cfs
$R_{10} = 6.98$ cfs

Peak Depth= 1.15'
Capacity at bank full= 8.81 cfs
18.0" Diameter Pipe n= 0.012 Length= 110.0' Slope= 0.0060 '/'

## Reach 212R: Storm Drain Pipe P-212

Inflow = 0.45 cfs @ 11.98 hrs, Volume= 0.035 af
Outflow = 0.45 cfs @ 11.98 hrs, Volume= 0.035 af, Atten= 1%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.5 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.2 fps, Avg. Travel Time= 0.8 min

$R_2 = 0.24$ cfs
$R_{10} = 0.38$ cfs

Peak Depth= 0.22'
Capacity at bank full= 4.23 cfs
12.0" Diameter Pipe n= 0.012 Length= 55.0' Slope= 0.0120 '/'

## Reach 213R: Storm Drian Pipe P-213

Inflow = 11.99 cfs @ 12.00 hrs, Volume= 0.991 af
Outflow = 11.86 cfs @ 12.01 hrs, Volume= 0.990 af, Atten= 1%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 7.7 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.9 fps, Avg. Travel Time= 0.3 min

$R_2 = 5.89$ cfs
$R_{10} = 10.04$ cfs

Peak Depth= 1.22'
Capacity at bank full= 11.98 cfs
18.0" Diameter Pipe n= 0.012 Length= 55.0' Slope= 0.0111 '/'

## Reach 214R: Storm Drain Pipe P-214

Inflow = 2.82 cfs @ 12.00 hrs, Volume= 0.203 af
Outflow = 2.80 cfs @ 12.00 hrs, Volume= 0.203 af, Atten= 1%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 8.4 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.7 fps, Avg. Travel Time= 0.2 min

$R_2 = 1.33$ cfs

$R_{10} = 2.34$ cfs

Peak Depth= 0.44'
Capacity at bank full= 7.01 cfs
12.0" Diameter Pipe n= 0.012 Length= 30.0' Slope= 0.0330 '/'

## Reach 215R: Storm Drain Pipe P-215

Inflow = 0.73 cfs @ 11.98 hrs, Volume= 0.059 af
Outflow = 0.73 cfs @ 11.98 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.8 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.3 fps, Avg. Travel Time= 0.3 min

$R_2 = 0.40$ cfs

$R_{10} = 0.62$ cfs

Peak Depth= 0.30'
Capacity at bank full= 3.86 cfs
12.0" Diameter Pipe n= 0.012 Length= 20.0' Slope= 0.0100 '/'

## Reach 2031R: Reach from SC 2031 to CB-203

Inflow = 0.66 cfs @ 12.16 hrs, Volume= 0.060 af
Outflow = 0.62 cfs @ 12.26 hrs, Volume= 0.060 af, Atten= 6%, Lag= 5.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 0.6 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 0.5 fps, Avg. Travel Time= 3.2 min

$R_2 = 0.20$ cfs

$R_{10} = 0.51$ cfs

Peak Depth= 0.01'
Capacity at bank full= 1,038.64 cfs
100.00' x 1.00' deep channel, n= 0.020 Length= 95.0' Slope= 0.0200 '/'
Side Slope Z-value= 0.1 '/'

## Reach 2170R: Reach From Route 9 to Presumpscot Street

Inflow = 15.53 cfs @ 12.30 hrs, Volume= 1.655 af
Outflow = 14.95 cfs @ 12.44 hrs, Volume= 1.640 af, Atten= 4%, Lag= 8.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 5.4 fps, Min. Travel Time= 4.9 min
Avg. Velocity = 2.1 fps, Avg. Travel Time= 12.6 min

$R_2 = 4.42$ cfs

$R_{10} = 11.69$ cfs

Peak Depth= 0.66'
Capacity at bank full= 84.51 cfs
4.00' x 2.00' deep channel, n= 0.035 Length= 1,600.0' Slope= 0.0400 '/'
Side Slope Z-value= 0.3 '/'

12/21

## Reach 2180R: Reach From Route 9 to Parking Lot

Inflow = 17.01 cfs @ 12.30 hrs, Volume= 1.815 af
Outflow = 16.81 cfs @ 12.33 hrs, Volume= 1.812 af, Atten= 1%, Lag= 1.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 7.2 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 3.1 fps, Avg. Travel Time= 2.4 min

$R_2 = 4.65$ cfs
$R_{10} = 12.72$ cfs

Peak Depth= 0.96'
Capacity at bank full= 59.33 cfs
2.00' x 2.00' deep channel, n= 0.035 Length= 450.0' Slope= 0.0600 '/'
Side Slope Z-value= 0.5 '/'

## Reach 2181R: Reach Parking Lot to CB

Inflow = 16.81 cfs @ 12.33 hrs, Volume= 1.812 af
Outflow = 16.71 cfs @ 12.34 hrs, Volume= 1.810 af, Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 10.1 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.8 fps, Avg. Travel Time= 1.1 min

$R_2 = 4.54$ cfs
$R_{10} = 12.55$ cfs

Peak Depth= 0.33'
Capacity at bank full= 94.31 cfs
5.00' x 1.00' deep channel, n= 0.013 Length= 250.0' Slope= 0.0400 '/'
Side Slope Z-value= 0.1 '/'

## Reach 2182R: Reach CB to Presump St. Culvert

Inflow = 16.71 cfs @ 12.34 hrs, Volume= 1.810 af
Outflow = 16.37 cfs @ 12.38 hrs, Volume= 1.808 af, Atten= 2%, Lag= 2.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 11.5 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 5.7 fps, Avg. Travel Time= 2.0 min

$R_2 = 4.51$ cfs
$R_{10} = 12.34$ cfs

Peak Depth= 1.13'
Capacity at bank full= 17.99 cfs
18.0" Diameter Pipe n= 0.012 Length= 700.0' Slope= 0.0250 '/'

## Reach 2183R: Culvert Accross Presumpscot Street

Inflow = 132.62 cfs @ 12.25 hrs, Volume= 14.364 af
Outflow = 132.48 cfs @ 12.26 hrs, Volume= 14.363 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 19.7 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 8.9 fps, Avg. Travel Time= 0.2 min

$R_2 = 42.50$ cfs
$R_{10} = 102.10$ cfs

Peak Depth= 2.30'
Capacity at bank full= 172.33 cfs
42.0" Diameter Pipe n= 0.012 Length= 100.0' Slope= 0.0250 '/'

## Reach 2184R: Stream Reach Pres. St. to AP-2

Inflow = 132.48 cfs @ 12.26 hrs, Volume= 14.363 af
Outflow = 131.89 cfs @ 12.28 hrs, Volume= 14.353 af, Atten= 0%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs
Max. Velocity= 9.6 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 4.0 fps, Avg. Travel Time= 1.1 min

$R_2 = 42.46$ cfs

$R_{10} = 101.99$ cfs

Peak Depth= 2.21'
Capacity at bank full= 415.56 cfs
4.00' x 4.00' deep channel, n= 0.035 Length= 265.0' Slope= 0.0350 '/'
Side Slope Z-value= 1.0 '/'

## Reach AP-2: (new node)

Inflow = 139.35 cfs @ 12.27 hrs, Volume= 15.588 af
Outflow = 139.35 cfs @ 12.27 hrs, Volume= 15.588 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$R_2 = 45.43$ cfs

$R_{10} = 107.57$ cfs

## Pond 201P: Inlet to CB-201

Inflow = 1.39 cfs @ 11.99 hrs, Volume= 0.102 af
Outflow = 1.38 cfs @ 11.99 hrs, Volume= 0.102 af, Atten= 0%, Lag= 0.0 min
Primary = 1.38 cfs @ 11.99 hrs, Volume= 0.102 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$R_2 = 0.72$ cfs

$R_{10} = 1.17$ cfs

Peak Elev= 0.06' Storage= 5 cf
Plug-Flow detention time= (not calculated)
Storage and wetted areas determined by Prismatic sections

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
└1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 202P: Inlet for CB-202

Inflow = 1.60 cfs @ 11.99 hrs, Volume= 0.113 af
Outflow = 1.60 cfs @ 11.99 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min
Primary = 1.60 cfs @ 11.99 hrs, Volume= 0.113 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$R_2 = 0.78$ cfs

Peak Elev= 0.07' Storage= 5 cf
Plug-Flow detention time= (not calculated)
Storage and wetted areas determined by Prismatic sections

$R_{10} = 1.34$ cfs

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
└1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 203P: Inlet for CB-203

Inflow = 1.29 cfs @ 12.00 hrs, Volume= 0.144 af
Outflow = 1.29 cfs @ 12.00 hrs, Volume= 0.144 af, Atten= 0%, Lag= 0.0 min
Primary = 1.29 cfs @ 12.00 hrs, Volume= 0.144 af

$R_2 = 0.62$ cfs

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

Peak Elev= 0.06' Storage= 5 cf
Plug-Flow detention time= 0.1 min calculated for 0.143 af (99% of inflow)
Storage and wetted areas determined by Prismatic sections

$R_{10} = 1.06$ cfs

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
└1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 204P: Inlet to CB-204

| | | | | | |
|---|---|---|---|---|---|
| Inflow | = | 0.76 cfs @ | 11.99 hrs, Volume= | 0.059 af | |
| Outflow | = | 0.76 cfs @ | 11.99 hrs, Volume= | 0.059 af, | Atten= 0%, Lag= 0.0 min |
| Primary | = | 0.76 cfs @ | 11.99 hrs, Volume= | 0.059 af | |

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$R_2 = 0.41$ cfs

$R_{10} = 0.65$ cfs

Peak Elev= 0.04' Storage= 3 cf
Plug-Flow detention time= (not calculated)
Storage and wetted areas determined by Prismatic sections

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
└1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 205P: Inlet for CB-205

| | | | | | |
|---|---|---|---|---|---|
| Inflow | = | 0.65 cfs @ | 11.99 hrs, Volume= | 0.048 af | |
| Outflow | = | 0.64 cfs @ | 11.99 hrs, Volume= | 0.048 af, | Atten= 0%, Lag= 0.0 min |
| Primary | = | 0.64 cfs @ | 11.99 hrs, Volume= | 0.048 af | |

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$R_2 = 0.34$ cfs

$R_{10} = 0.55$ cfs

Peak Elev= 0.04' Storage= 3 cf
Plug-Flow detention time= (not calculated)
Storage and wetted areas determined by Prismatic sections

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
└1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 206P: Inlet for CB-206

Inflow = 0.59 cfs @ 11.98 hrs, Volume= 0.044 af
Outflow = 0.59 cfs @ 11.98 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.1 min
Primary = 0.59 cfs @ 11.98 hrs, Volume= 0.044 af

$Q_2 = 0.29$ cfs

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$Q_{10} = 0.49$ cfs

Peak Elev= 0.04' Storage= 3 cf
Plug-Flow detention time= 0.1 min calculated for 0.044 af (100% of inflow)
Storage and wetted areas determined by Prismatic sections

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
↑—1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 207P: Inlet for CB-207

Inflow = 0.52 cfs @ 11.98 hrs, Volume= 0.040 af
Outflow = 0.52 cfs @ 11.98 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.1 min
Primary = 0.52 cfs @ 11.98 hrs, Volume= 0.040 af

$Q_2 = 0.27$ cfs

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$Q_{10} = 0.44$ cfs

Peak Elev= 0.03' Storage= 2 cf
Plug-Flow detention time= 0.1 min calculated for 0.040 af (99% of inflow)
Storage and wetted areas determined by Prismatic sections

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
↑—1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 208P: Inlet for CB-208

| | | | | |
|---|---|---|---|---|
| Inflow | = | 0.49 cfs @ | 11.98 hrs, Volume= | 0.037 af |
| Outflow | = | 0.49 cfs @ | 11.98 hrs, Volume= | 0.037 af, Atten= 0%, Lag= 0.1 min |
| Primary | = | 0.49 cfs @ | 11.98 hrs, Volume= | 0.037 af |

$Q_2 = 0.25$ cfs

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$Q_{10} = 0.42$ cfs

Peak Elev= 0.03' Storage= 2 cf
Plug-Flow detention time= 0.1 min calculated for 0.037 af (99% of inflow)
Storage and wetted areas determined by Prismatic sections

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
└1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 209P: Inlet of CB-209

| | | | | |
|---|---|---|---|---|
| Inflow | = | 0.56 cfs @ | 11.98 hrs, Volume= | 0.042 af |
| Outflow | = | 0.56 cfs @ | 11.98 hrs, Volume= | 0.042 af, Atten= 0%, Lag= 0.1 min |
| Primary | = | 0.56 cfs @ | 11.98 hrs, Volume= | 0.042 af |

$Q_2 = 0.29$ cfs

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$Q_{10} = 0.47$ cfs

Peak Elev= 0.03' Storage= 3 cf
Plug-Flow detention time= 0.1 min calculated for 0.042 af (100% of inflow)
Storage and wetted areas determined by Prismatic sections

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
└1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 210P: Inlet of CB-210

| | | | | | |
|---|---|---|---|---|---|
| Inflow | = | 0.46 cfs @ | 11.98 hrs, | Volume= | 0.035 af |
| Outflow | = | 0.46 cfs @ | 11.98 hrs, | Volume= | 0.035 af, Atten= 0%, Lag= 0.1 min |
| Primary | = | 0.46 cfs @ | 11.98 hrs, | Volume= | 0.035 af |

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$R_2 = 0.24$ cfs

Peak Elev= 0.03' Storage= 2 cf
Plug-Flow detention time= 0.1 min calculated for 0.035 af (99% of inflow)
Storage and wetted areas determined by Prismatic sections

$R_{10} = 0.39$ cfs

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
↳1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 211P: Inlet of CB-211

| | | | | | |
|---|---|---|---|---|---|
| Inflow | = | 0.57 cfs @ | 11.98 hrs, | Volume= | 0.041 af |
| Outflow | = | 0.57 cfs @ | 11.98 hrs, | Volume= | 0.041 af, Atten= 0%, Lag= 0.1 min |
| Primary | = | 0.57 cfs @ | 11.98 hrs, | Volume= | 0.041 af |

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$R_2 = 0.27$ cfs

Peak Elev= 0.03' Storage= 3 cf
Plug-Flow detention time= 0.1 min calculated for 0.041 af (99% of inflow)
Storage and wetted areas determined by Prismatic sections

$R_{10} = 0.48$ cfs

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
↳1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 212P: Inlet of CB-212

| | | | | |
|---|---|---|---|---|
| Inflow | = | 0.45 cfs @ | 11.97 hrs, Volume= | 0.035 af |
| Outflow | = | 0.45 cfs @ | 11.98 hrs, Volume= | 0.035 af, Atten= 0%, Lag= 0.1 min |
| Primary | = | 0.45 cfs @ | 11.98 hrs, Volume= | 0.035 af |

$R_2 = 0.24$ cfs

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$R_{10} = 0.38$ cfs

Peak Elev= 0.03' Storage= 2 cf
Plug-Flow detention time= 0.1 min calculated for 0.035 af (99% of inflow)
Storage and wetted areas determined by Prismatic sections

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
↳1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 213P: Inlet of CB-213

| | | | | |
|---|---|---|---|---|
| Inflow | = | 0.68 cfs @ | 11.98 hrs, Volume= | 0.050 af |
| Outflow | = | 0.68 cfs @ | 11.98 hrs, Volume= | 0.050 af, Atten= 0%, Lag= 0.1 min |
| Primary | = | 0.68 cfs @ | 11.98 hrs, Volume= | 0.050 af |

$R_2 = 0.33$ cfs

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$R_{10} = 0.57$ cfs

Peak Elev= 0.04' Storage= 3 cf
Plug-Flow detention time= 0.1 min calculated for 0.049 af (99% of inflow)
Storage and wetted areas determined by Prismatic sections

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
↳1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 214P: Inlet of CB-214

| | | | | |
|---|---|---|---|---|
| Inflow | = | 2.10 cfs @ | 12.00 hrs, Volume= | 0.144 af |
| Outflow | = | 2.09 cfs @ | 12.00 hrs, Volume= | 0.144 af, Atten= 0%, Lag= 0.0 min |
| Primary | = | 2.09 cfs @ | 12.00 hrs, Volume= | 0.144 af |

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$Q_2 = 0.95$ cfs

Peak Elev= 0.08' Storage= 6 cf
Plug-Flow detention time= (not calculated)
Storage and wetted areas determined by Prismatic sections

$Q_{10} = 1.73$ cfs

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
└1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

## Pond 215P: Inlet of CB-215

| | | | | |
|---|---|---|---|---|
| Inflow | = | 0.73 cfs @ | 11.98 hrs, Volume= | 0.059 af |
| Outflow | = | 0.73 cfs @ | 11.98 hrs, Volume= | 0.059 af, Atten= 0%, Lag= 0.1 min |
| Primary | = | 0.73 cfs @ | 11.98 hrs, Volume= | 0.059 af |

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.10 hrs

$Q_2 = 0.40$ cfs

Peak Elev= 0.04' Storage= 3 cf
Plug-Flow detention time= 0.1 min calculated for 0.059 af (100% of inflow)
Storage and wetted areas determined by Prismatic sections

$Q_{10} = 0.62$ cfs

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 0.00 | 4 | 0 | 0 |
| 0.30 | 150 | 23 | 23 |
| 0.60 | 300 | 68 | 91 |

**Primary OutFlow** (Free Discharge)
└1=Orifice/Grate

| # | Routing | Invert | Outlet Devices |
|---|---|---|---|
| 1 | Primary | 0.00' | **0.50' x 0.15' Horiz. Orifice/Grate X 21.00** Limited to weir flow C= 0.600 |

2/2/

## HYDROCAD WORKSHEET - PROPOSED CONDITIONS

## TIME OF CONCENTRATION ($T_c$) - DIRECT ENTRY

**SUBCATCHMENT** **SC-1**

| | CHANNEL FLOW | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | C - D | | | |
| 1 | SURFACE DESCRIPTION | GWW | | | |
| 2 | FLOW LENGTH, L (ft) | 80 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.075 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 4.0 | | | |
| 5 | $T_t$ = L/60 V, (min) | 0.3 | | | |

| TOTAL $T_t$, (min) | 0.3 |
|---|---|

**SUBCATCHMENT** **SC-214**

| | CHANNEL FLOW | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | C-D | | | |
| 1 | SURFACE DESCRIPTION | PA | | | |
| 2 | FLOW LENGTH, L (ft) | 170 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.02 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 2.7 | | | |
| 5 | $T_t$ = L/60 V, (min) | 1.0 | | | |

| TOTAL $T_t$, (min) | 1.0 |
|---|---|

**SUBCATCHMENT** **SC-216**

| | CHANNEL FLOW | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | B-C | C-D | | |
| 1 | SURFACE DESCRIPTION | GWW | STWC | | |
| 2 | FLOW LENGTH, L (ft) | 220 | 75 | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.005 | 0.24 | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 1 | 9 | | |
| 5 | $T_t$ = L/60 V, (min) | 3.7 | 0.1 | | |

| TOTAL $T_t$, (min) | 3.8 |
|---|---|

**SUBCATCHMENT** **SC-217**

CHANNEL FLOW

| | | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | C - D | | | |
| 1 | SURFACE DESCRIPTION | STWC | | | |
| 2 | FLOW LENGTH, L (ft) | 750 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.025 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 3.4 | | | |
| 5 | Tt = L/60 V, (min) | 3.7 | | | |

| TOTAL Tt, (min) | 3.7 |
|---|---|

**SUBCATCHMENT** **SC-218**

CHANNEL FLOW

| | | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | C-D | | | |
| 1 | SURFACE DESCRIPTION | STWC | | | |
| 2 | FLOW LENGTH, L (ft) | 750 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.025 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 3.4 | | | |
| 5 | Tt = L/60 V, (min) | 3.7 | | | |

| TOTAL Tt, (min) | 3.7 |
|---|---|

**SUBCATCHMENT** **SC-219**

CHANNEL FLOW

| | | SEGMENT ID | | | |
|---|---|---|---|---|---|
| | | D - E | | | |
| 1 | SURFACE DESCRIPTION | STWC | | | |
| 2 | FLOW LENGTH, L (ft) | 450 | | | |
| 3 | CHANNEL SLOPE, s (ft/ft) | 0.02 | | | |
| 4 | VELOCITY FROM NEH 4, V (ft/s) | 3.2 | | | |
| 5 | Tt = L/60 V, (min) | 2.3 | | | |

| TOTAL Tt, (min) | 2.3 |
|---|---|

# APPENDIX C

# WATER QUALITY WORKSHEETS

# Worksheets for Evaluating Stormwater BMPs
## Worksheet 1. Identifying Subwatersheds

**Step 1. Identify and characterize significant subwatersheds within the development site.** Since no receiving water should receive stormwater that has not received the prescribed net level of treatment (% TSS Removal), areas which drain to different rivers, streams or brooks; lakes or ponds; or coastal waters should be delineated and evaluated discreetly. This means that if the entire developed site drained directly to a single stream it could all be treated as one watershed, but if half of it drained to stream "x" and the other half to stream "y", two separate watersheds must be delineated and two separate analyses performed. Delineate each subwatershed in the development site and complete the following table. Indicate whether the development is a residential subdivision or nonsubdevesion.

| Sub-wtshd ID | Receiving Waterbody | Type of Development subd, nonsub | Total Area (Acres) | Wetland Area (Acres) | Develop-able Area total-wetl |
|---|---|---|---|---|---|
| A | UNNAMED STREAM | NON SUB | 4.1 | (BROOK) .05 +/- | 4.05 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**For subwatersheds which drain directly or indirectly to *sensitive lakes or ponds* see Phosphorus Control in Lake Watersheds: a Technical Guide for Evaluating New Development (DEP,1992).**

**For subwatersheds which *do not* drain directly or indirectly to *sensitive lakes or ponds* go to Worksheet 2**

# Worksheets for Evaluating Stormwater BMPs
## Worksheet 2. Determining the Required Level of Treatment

Note: This worksheet is meant to be used on subwatersheds which *do not* drain directly or indirectly to *sensitive lakes or ponds.*

**Step 2. Determine the required level of stormwater treatment for each sub watershed.**

a. **Residential subdivisions:**

(1). For subdivisions with an existing impervious surface road or with new or upgraded roads with less than 4,000 sq. ft. of additional impervious surface the required level of stormwater treatment is **15% TSS removal.**
(2). For subdivisions with new or upgraded roads greater than 4,000 sq. ft. new impervious surface the required level of stormwater treatment is **40% TSS removal.**

b. **Non subdivision development:** Complete the following table by:

(1). Calculating the % imperviousness for each subwatershed by dividing the area within the subwatershed which will be **impervious** (definition in Sect 5.2.2) after development by the total developable area within the subwatershed and multiplying by 100.

% Impervious = (Impervious Area/Developable Area)x(100)

(2). Using the curve in figure ? to determine the required **% TSS removal.**

| Sub-wtshd ID | Type of Development subd, nonsub | Imperv. Area (Acres) | Develop. Area (Acres) | % Imper-vious | % TSS Removal (fig. ?) 5.1 |
|---|---|---|---|---|---|
| A | Non Sub | 1.57 | 4.05 | 38.7 | 50% |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**Next Step:** Complete Worksheet 3a + 3b (residential subdivision) or 3c (non-subdivision) for each subwatershed.

# Worksheets for Evaluating Stormwater BMPs
## Worksheet 3c. Determining Net % TSS Removal for Non-Subdivisions

**Step 3a. Determine the Net Weighted % TSS Removal in each Subwatershed.** Complete the following table for each subwatershed by:

- dividing the impervious area within the subwatershed into subareas to which the same BMPs are being applied
- calculating the **% of Total Impervious Area** for each subarea by dividing the subarea's impervious area by the total impervious area in the subwatershed (from **Worksheet 2**) and multiplying by 100
- multiplying the **% of Total Impervious Area** by the **Net BMP % TSS Removal Efficiency** (see note) for the BMP(s) being applied to the subarea
- adding the products to get the **Net weighted % TSS Removal** for the subwatershed.

Compare this to the prescribed % TSS removal for the subwatershed in **Worksheet 2**.

If only one BMP is applied to a subarea the **Net BMP % TSS Removal Efficiency** is equal to the % TSS removal efficiency for the BMP. If more than one BMP are applied in series, the **Net BMP % TSS Removal Efficiency** for the suite of BMPs is calculated as follows:

**Net BMP % Removal Eff.** $= 100[1-\{(1-r_1)x(1-r_2)x...x(1-r_n)\}]$

where $r_n$ is the removal efficiency of each BMP expressed as a fraction.

**Subwatershed** ____.

| Subarea ID | | % Total Imperv. Area | | Net BMP % TSS Removal | | | = | BMP Notes |
|---|---|---|---|---|---|---|---|---|
| A | : | 100% | X | 50 | X 0.01 = | 50 | | |
| | : | | X | | X 0.01 = | | | |
| | : | | X | | X 0.01 = | | | |
| | : | | X | | X 0.01 = | | | |
| | : | | X | | X 0.01 = | | | |
| | : | | X | | X 0.01 = | | | |
| | : | | X | | X 0.01 = | | | |
| | : | | X | | X 0.01 = | | | |
| | : | | X | | X 0.01 = | | | |
| **Totals** | | 100% | | **Net Weighted % TSS Removal for Subwatershed** | | | = | |

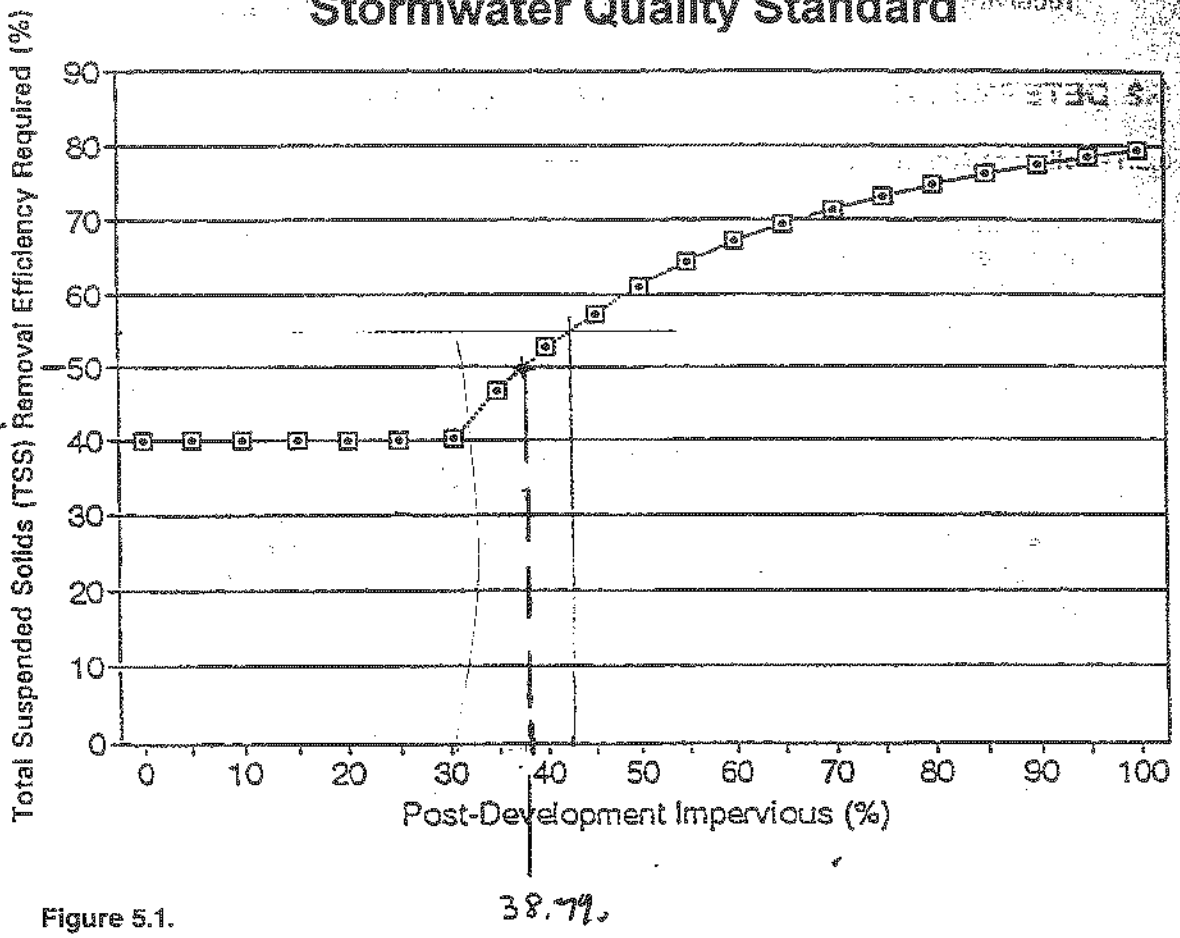



**Figure 5.1.**

For the purposes of this manual, ***impervious surface*** is fully defined as a hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious areas include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam, or other surfaces which similarly impede the natural infiltration of stormwater.

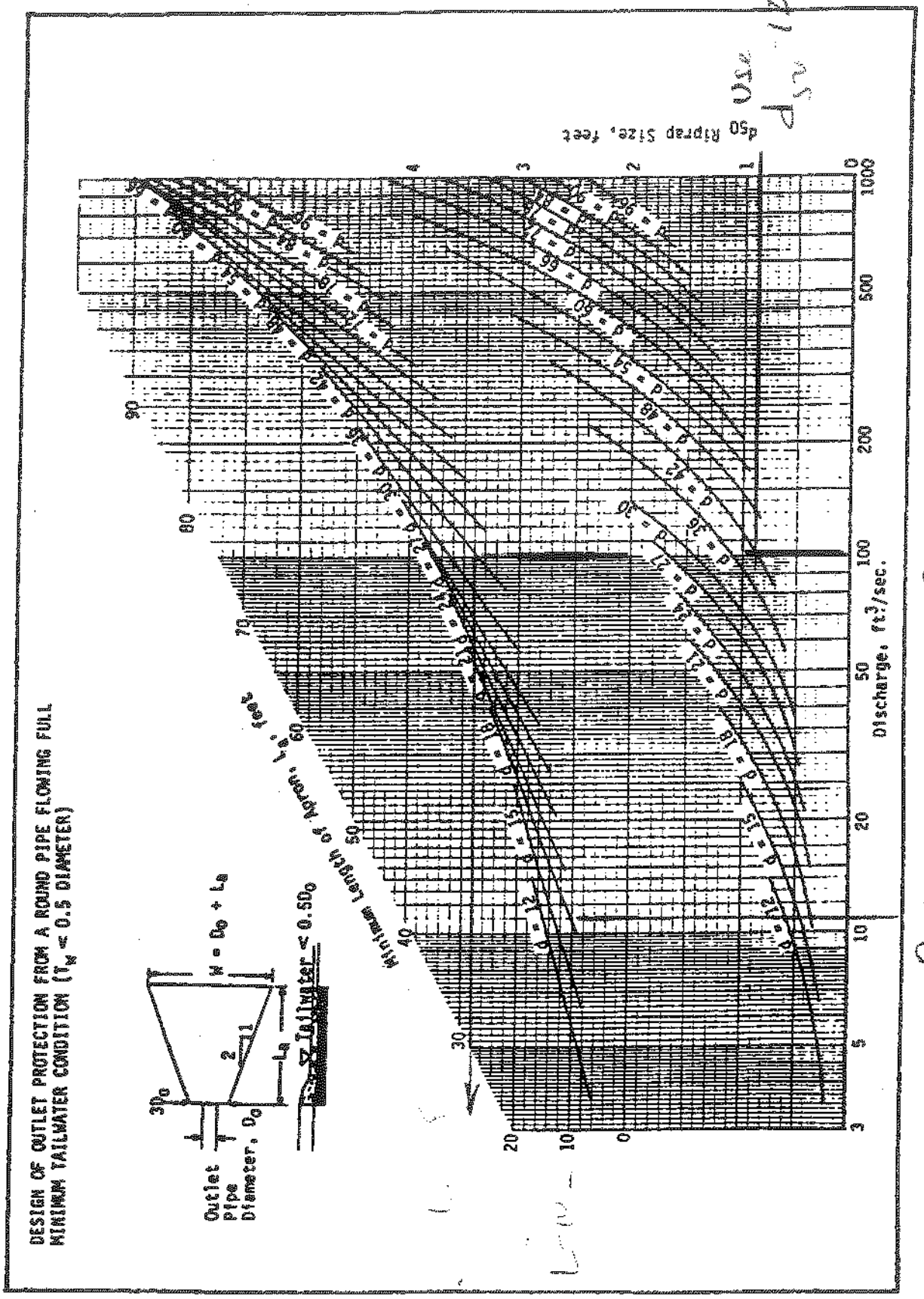
This BMP manual is not regulatory. However, the practices described in this manual are designed to ensure that stormwater runoff from a development site not adversely affect the physical, biological, and chemical properties of the receiving water or of associated aquatic habitats. As such, use of this manual may assist compliance with applicable statutes, regulations, and ordinances. Other equivalent techniques of stormwater treatment, of course, will also assist with compliance.

**Alternatively,** the criterion of reducing post development TSS loadings to predevelopment levels may be applied. This criterion is not intended to be used as an alternative to achieving adequate control where existing high sediment loadings are the result of poor management of "developed" sites such as farmlands where appropriate erosion control components of a USDA conservation management plan are not being used, or sites where land disturbed by previous development (e.g., gravel pits or log yards) was not permanently stabilized (EPA, 1993.)

# APPENDIX D

# RIPRAP APRONS

Figure 32.1 MINIMUM TAILWATER CONDITION (USDA Soil Conservation Service)



# APPENDIX E

## PROJECT DRAWINGS

| Dwg. # | Title |
|---|---|
| D-100 | Stormwater Management Plan Pre-Development |
| D-101 | Stormwater Management Plan Post-Development |

Stormwater runoff from subcatchment SC-1 is conveyed to a 42-inch diameter culvert, the inlet of which is Analysis Point 1. Flows from SC-1 eventually flow westward below the St. Lawrence and Atlantic Railroad Tracks and below Interstate 95 prior to discharge to Casco Bay. Subcatchment SC-1 is approximately 1.7 acres in pre-development and approximately 1.1 acres in post-development. Subcatchment SC-1 consists of open space, woods, gravel railroad right of way, and impervious roof and pavement in both pre and post development. Subcatchment SC-1 loses apporximately 0.6 acres to SC-2 in post-development due to the construction of the intermodel facility parking lot.

Storm water runoff from SC-2 is conveyed to a 30-inch by 30-inch stone arch located in the southeast corner of the site, the inlet of which is Analysis Point 2. In pre-development subcatchment SC-2 consists of a 62.6 acre upgradient watershed to the west (Subcatchments SC-217, 218, and 219) and a 3.2 acre site watershed between Presumpscot Street and the St. Lawrence and Atlantic Railroad (SC-2). Both the intermodel facility watershed and the upgradient watershed convey runoff to an unnamed stream along the south side of the property. In pre-development the upgradient watershed consists mainly of woods, open space and urban industrial areas. In pre-development the intermodel facility watershed consists of open space with some woods, gravel railroad right of way, and impervious roof and pavement. In post-development conditions the upgradient watershed will be unchanged in area and land use from its pre-development conditions. In its post-development conditions the intermodel facility watershed will have approximately 3.8 acres and will consist of impervious pavement with some open area, woods, and gravel railroad right of way.

To determine the peak surface water runoff rates for each watershed, a weighted curve number ($C_N$) and time of concentration ($T_c$) were calculated for each subcatchment in pre- and post-development conditions based on area, hydrologic soil group, cover type, and drainage patterns. These calculations are in Appendix A and B respectively. Pre- and post-development conditions for the SC-1 and SC-2 watershed are summarized in Table 1. The catchment boundaries and Tc routing for pre-development and post-development conditions for the upgradient watershed are shown in Figure 2. The catchment boundaries and $T_c$ routing for pre-development site conditions

SME

Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants

August 14, 2001

00013.07
010813la.doc

City of Portland
Attn: Mr. Larry Ash
Traffic Engineering Division
65 Hanover Street
Portland, ME 04101

Portland, Maine

Subject: October Corp.
Intermodal Transfer Facility
Traffic Study

Dear Mr. Ash:

In response to our telephone conversation of June 28, 2001 concerning October Corporation's proposed intermodal transfer facility on Presumpscot Street, we offer the following information for your review:

1. Sight distance at the project entrances:

Sevee & Maher Engineers, Inc. (SME) has measured the available sight distance at each proposed entrance. Sight distance was measured at a point 10 feet from the edge of travelway to the centerline of the opposing lane(s), assuming a height of eye of 3.5 feet and a height of object of 4.25 feet. The available sight distance from each entrance is as follows:

| | Available Site Distance | |
|---|---|---|
| | Left | Right |
| North Entrance/Exit | >750' | >950' |
| South Entrance/Exit | 530' | >1200' |

The measured sight distance exceeds the City's sight distance standard of 513 feet for a posted speed limit of 35 mph, as specified in Section III, paragraph 4, Traffic Design Standards and Guidelines of the "City of Portland, Maine Technical and Design Standards and Guidelines," March 2000.



4 Blanchard Road P.O. Box 85A Cumberland Center, ME 04021 (207) 829-5016 FAX (207) 829-5692 www.smemaine.com

2. Impact on Intersection Capacity of Washington Avenue and Presumpscot Street:

SME conducted turning movement counts at Washington Avenue and Presumpscot Street from 6:00 AM to 9:00 AM, and from 3:00 PM to 6:00 PM on Tuesday, July 10, 2001. Because of late afternoon thunderstorms which caused numerous accidents and traffic delays, the afternoon count was repeated from 4:00 PM to 6:00 PM on Wednesday, July 18, 2001. Traffic generation from the project site was based on rates outlined in the 6th Edition of "ITE Trip Generation", Land Use 090; Park and Ride Lot with Bus Shuttle. It is expected that this facility (171 parking spaces) will generate 113 PM peak hour trips, and 109 AM peak hour trips. Based on the traffic distributions at Washington Avenue and studies conducted for the Pineland Center in New Gloucester, it was assumed that 15 new trips would be generated from/to Washington Avenue, 17 new trips would result on Presumpscot Street from Falmouth, with the remainder of the trips diverted from existing traffic on Washington Avenue.

Peak hour volumes were increased by 2 percent to account for traffic growth from 2001 to 2002. The morning and afternoon peak hour performance for 2002 was calculated for both the "Build" and "No-build" 2002 conditions. It was found that no significant degradation in the intersection's level of service will result from this project. The intersection will continue to operate at a Level of Service (LOS) B (AM) and C (PM). Performance charts, assumptions, and analyses are attached.

The traffic analysis was prepared through the combined efforts of Sevee & Maher Engineers, Inc. and HNTB of Westbrook, Maine. SME conducted turning movement counts, compiled intersection configuration data and performed the traffic generation and distribution analysis. HNTB reviewed the information compiled by SME and provided the peak hour performance analysis.

3. Presumpscot Street Truck Traffic:

Based on the turning movement counts, existing truck traffic on Presumpscot Street is as follows:

| | No. Trucks | % of Total Traffic |
|---|---|---|
| AM (6-9) | 101 | 9.4 |
| PM (4-6) | 43 | 6.1 |

Enclosed is a copy of site plans for Phase I of the project.

If you have any questions or require additional information, please contact me.

Sincerely,

SEVEE & MAHER ENGINEERS, INC.

John R. Kennedy, P.E.

Enclosures

# TRAFFIC STUDY
# FOR
# INTERMODAL TRANSFER FACILITY
# PRESUMPSCOT STREET
# PORTLAND, MAINE

## BY
## OCTOBER CORPORATION
## PORTLAND, MAINE

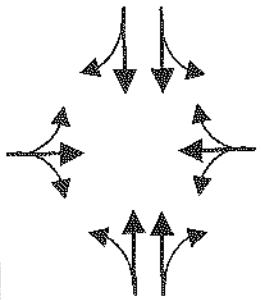
## AUGUST 2001

SME

*Sevee & Maher Engineers, Inc.*
*Waste Management and Hydrogeologic Consultants*
*Cumberland Center, Maine*

# Washington Ave. @ Presumpscot St.

## AM Peak Hour Performance, 2002 -- No-Build vs. Build

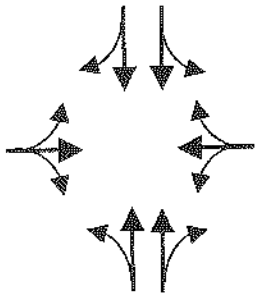
| Configuration | Movement | 2002 - No-Build | | | 2002 - Build | | |
|---|---|---|---|---|---|---|---|
| | | Volume | Delay | LOS | Volume | Delay | LOS |
|  | NB - L | 3 | 9.1 | A | 3 | 8.5 | A |
| | NB - T | 162 | | | 162 | | |
| | NB - R | 128 | | | 143 | | |
| | SB - L | 9 | 22.8 | C | 64 | 23.3 | C |
| | SB - T | 1,054 | | | 999 | | |
| | SB - R | 44 | | | 44 | | |
| | EB - L | 15 | 39.6 | D | 15 | 41.7 | D |
| | EB - T | 7 | | | 8 | | |
| | EB - R | 8 | | | 7 | | |
| | WB - L | 328 | 45.3 | D | 331 | 49.7 | D |
| | WB - T | 16 | | | 16 | | |
| | WB - R | 37 | | | 51 | | |
| | Intersection | 1,811 | 25.6 | C | 1,843 | 26.8 | C |

NOTES:

- Washington Ave. is considered the north-south route, with I-295 laying to the south.
- All volumes are unadjusted, but MDOT group mean factors indicate that 3rd week in July represents close to 30th high hour.

# Washington Ave. @ Presumpscot St.

## PM Peak Hour Performance, 2002 -- No-Build vs. Build

| Configuration | Movement | 2002 - No-Build Volume | 2002 - No-Build Delay | 2002 - No-Build LOS | 2002 - Build Volume | 2002 - Build Delay | 2002 - Build LOS |
|---|---|---|---|---|---|---|---|
|  | NB - L | 6 | 14.1 | B | 6 | 15.8 | B |
| | NB - T | 921 | | | 865 | | |
| | NB - R | 179 | | | 183 | | |
| | SB - L | 5 | 12.5 | B | 21 | 15.9 | B |
| | SB - T | 855 | | | 855 | | |
| | SB - R | 20 | | | 20 | | |
| | EB - L | 6 | 26.6 | C | 6 | 27.7 | C |
| | EB - T | 5 | | | 5 | | |
| | EB - R | 18 | | | 18 | | |
| | WB - L | 165 | 28.0 | C | 180 | 30.9 | C |
| | WB - T | 5 | | | 6 | | |
| | WB - R | 25 | | | 81 | | |
| | Intersection | 2,210 | 14.9 | B | 2,246 | 17.8 | B |

NOTES:

- Washington Ave. is considered the north-south route, with I-295 laying to the south.
- All volumes are unadjusted, but MDOT group mean factors indicate that 3rd week in July represents close to 30th high hour.

| PROJECT | COMP. BY | JOB NO. |
|---|---|---|
| October Corp<br>Presumpscot Street | JRK | 0013.07 |
| | CHK. BY | DATE<br>7/01 |

## Trip Generation:

Reference: ITE Trip Generation, 6th Edition

Land Use (090): Park and Ride Lot w/ Bus Service

# Trips PM Peak Hour

$T = 0.62(x) + 9.5$

$= 0.6(171) + 9.5 =$ 113 trips

22% enter, 78% exit

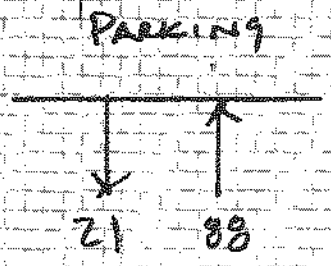
# Trip AM Peak Hour

$T = 0.64(171) - 34.7$ — 109 trips

80% enter

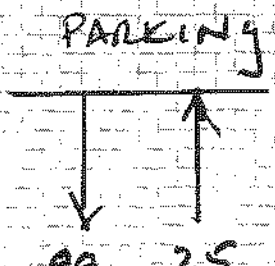
20% exit

### AM




109 trips

### P.M.




113 trips

| PROJECT | COMP. BY | JOB NO. |
|---|---|---|
| October Corp Presumpscut St | NK | D0013.07 |
| | CHK. BY | DATE |
| | | July 01 |

## TRIP DISTRIBUTION:

ASSUMPTION:

USE TRAFFIC DISTRIBUTION AT WASHINGTON AVE/PRESUMPSCUT STREET AS BASIS FOR ASSIGN TRIPS

ALL TRIPS ARE EXIST EXCEPT

(OUTBOUND WASHINGTON AVE AM

(INBOUND WASHINGTON AVE PM

WHICH ARE CONSIDERED NEW TRIPS ON WASHINGTON AVE/PRESUMPSCUT ST WITH DET/ONLY BEING REASSIGNED CENTRON, NEW GLOUCESTER (EXIST TRAFFIC STUDY ESTIMATES THIS TO BE 15 TRIPS

(2) PRESUMPSCUT ST EAST of PARKING CONSIDER AS NEW TRIPS DIVERTED FROM I 295

(3) REMAINDER of TRIPS EXIST ON WASHINGTON AVE AND ARE DIVERTED TO PARKING FACILITY VIA PRESUMPSCUT STREET

| PROJECT | COMP. BY | JOB NO. |
|---|---|---|
| October Comp<br>Presumpscot St Pkg | HLC | 100013.07 |
| | CHK. BY | DATE<br>July 01 |

Use AM Inbound Volume to Estabush Diverted Trips to Pkg

Pkg AM 88 entering trips

Assumes 15 new trips from Portland, So. Pkg, C.E. w/ dest New Gloucester

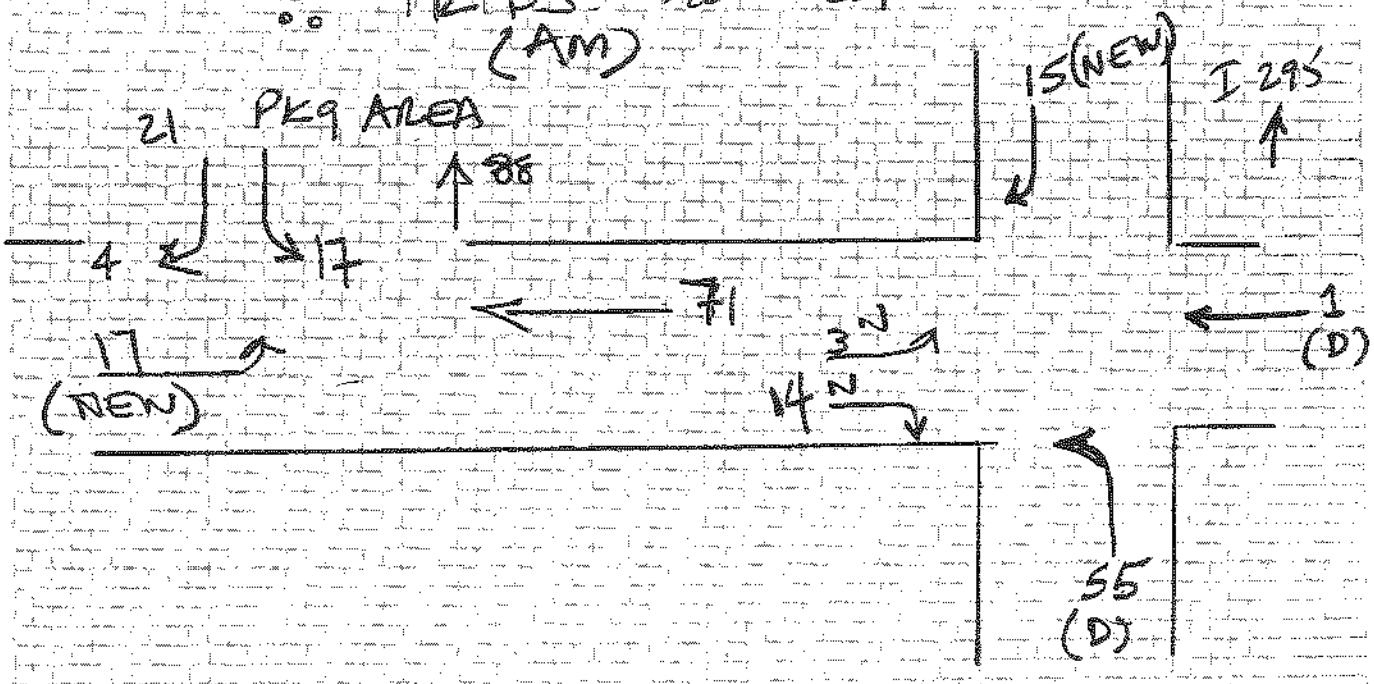
Remaining 73 remaining trips

Inbound Presumpscot St 23% (Assume New)

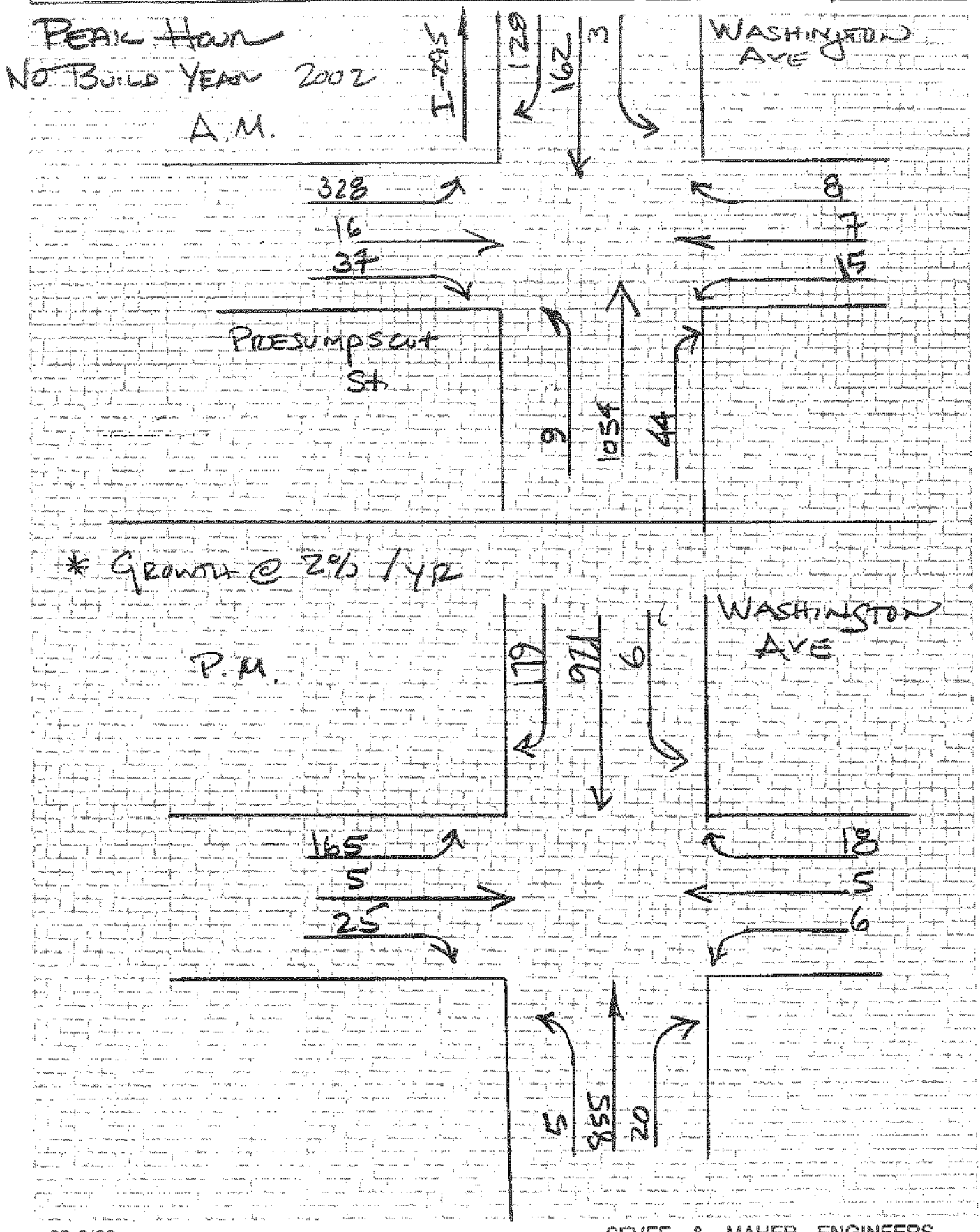
Washington 76% (Diverted)

Presump (E) 1% (Diverted)

∴ Trips to Lot (AM)



| PROJECT | COMP. BY | JOB NO. |
|---|---|---|
| October Corporation | JEK | 00073.07 |
| | CHK. BY | DATE 7/01 |



# Park-and-Ride Lot with Bus Service
# (090)

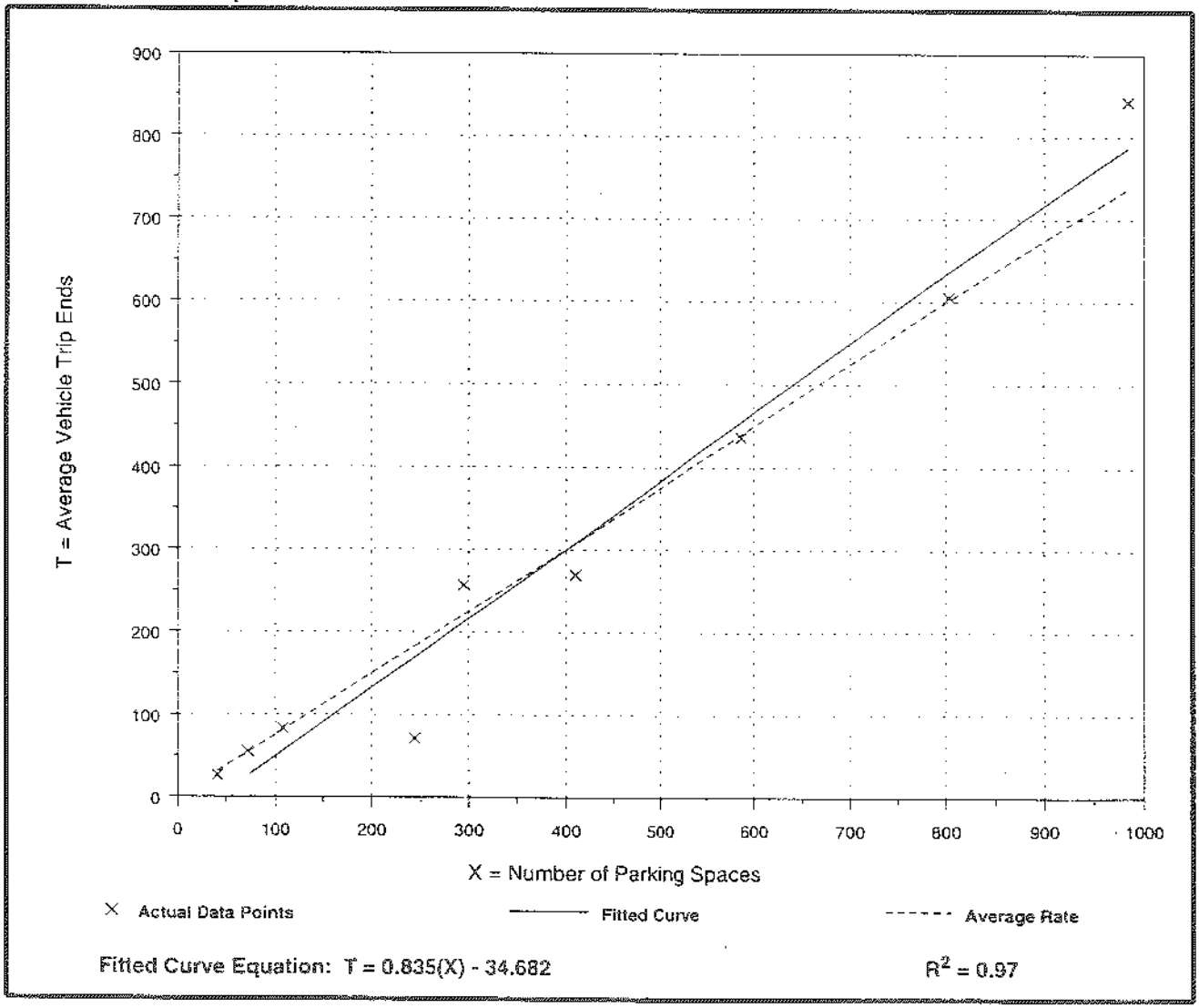
**Average Vehicle Trip Ends vs:** Parking Spaces
**On a:** Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 9
Average Number of Parking Spaces: 394
Directional Distribution: 80% entering, 20% exiting

## Trip Generation per Parking Space

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.75 | 0.29 - 0.87 | 0.87 |

## Data Plot and Equation




Fitted Curve Equation: $T = 0.835(X) - 34.682$

$R^2 = 0.97$

# Park-and-Ride Lot with Bus Service
## (090)

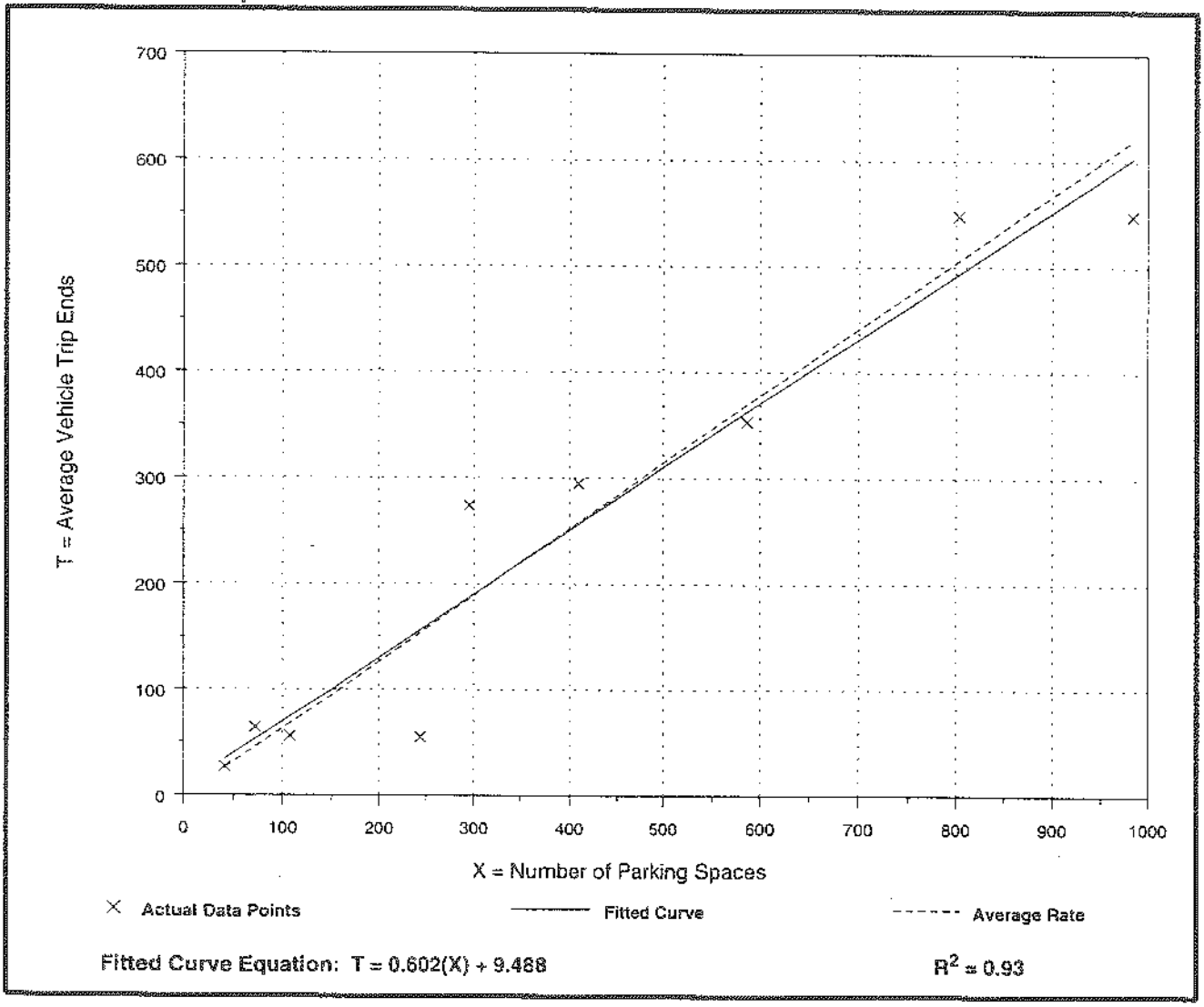
**Average Vehicle Trip Ends vs:** Parking Spaces
**On a:** Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 9
Average Number of Parking Spaces: 394
Directional Distribution: 22% entering, 78% exiting

### Trip Generation per Parking Space

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.63 | 0.23 - 0.93 | 0.81 |

### Data Plot and Equation

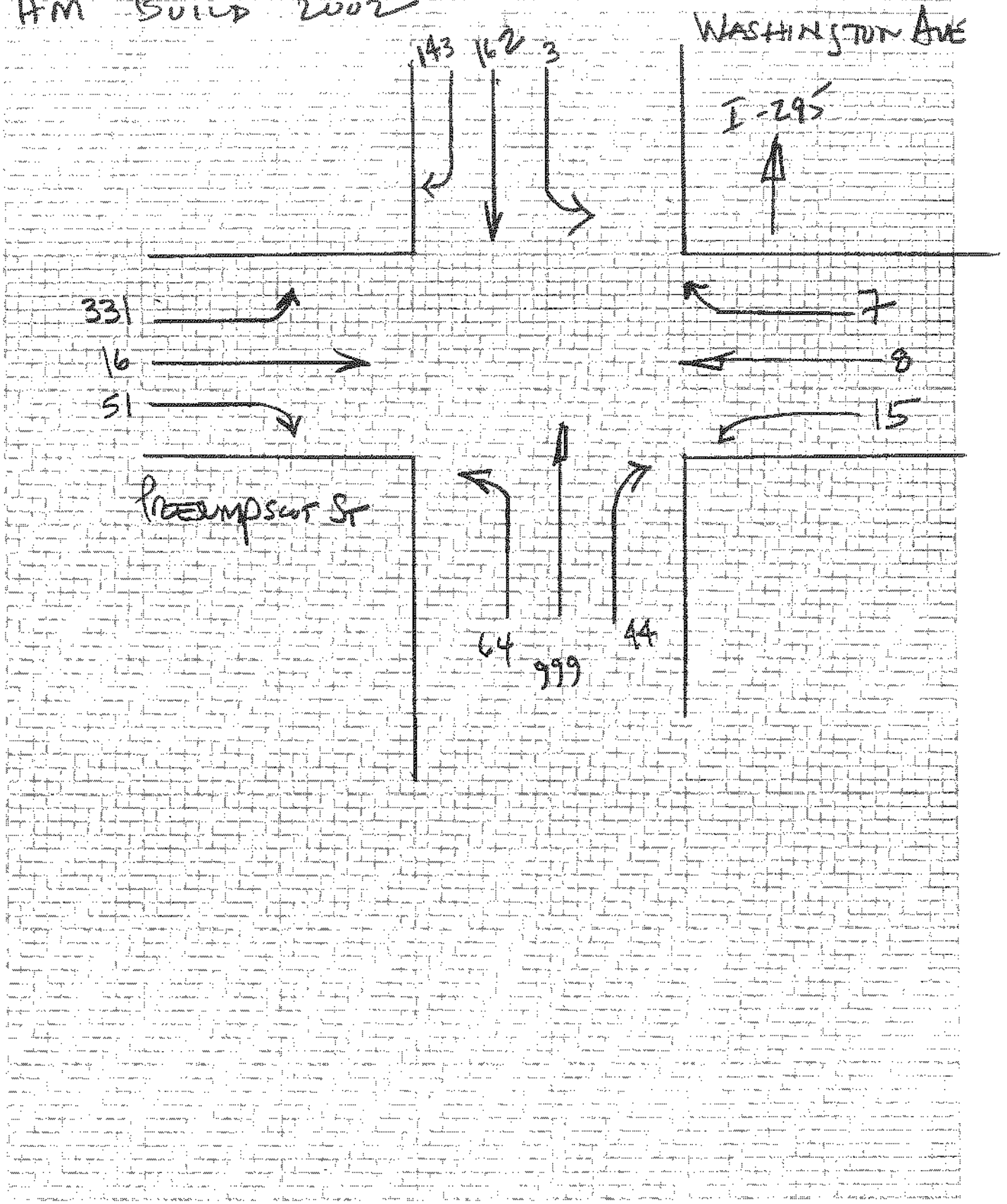



**Fitted Curve Equation:** $T = 0.602(X) + 9.488$

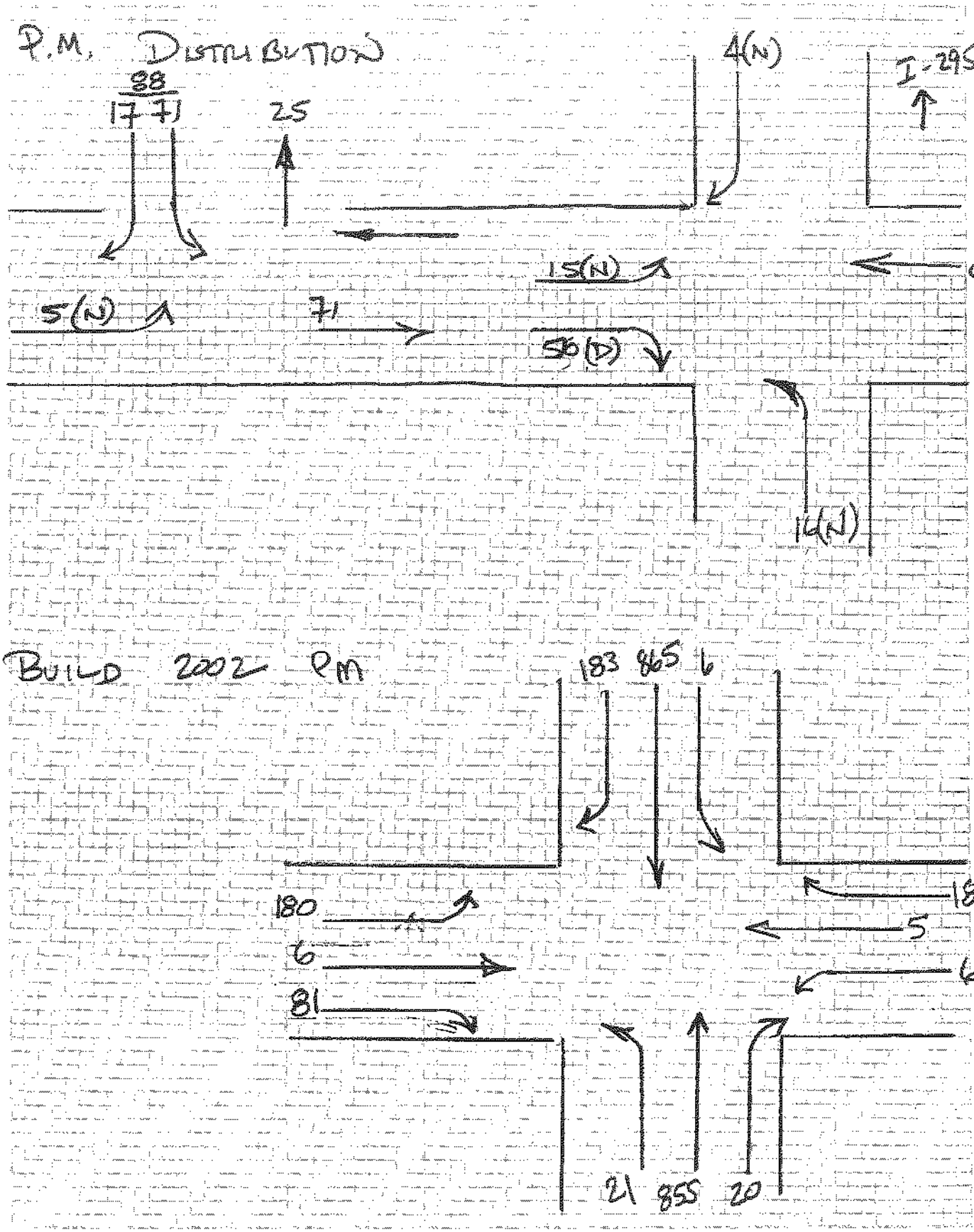
$R^2 = 0.93$

| PROJECT | COMP. BY | JOB NO. |
|---|---|---|
| October Comp<br>Presumpscot St | JRL | 00013.07 |
| | CHK. BY | DATE<br>7/01 |

AM Build 2002

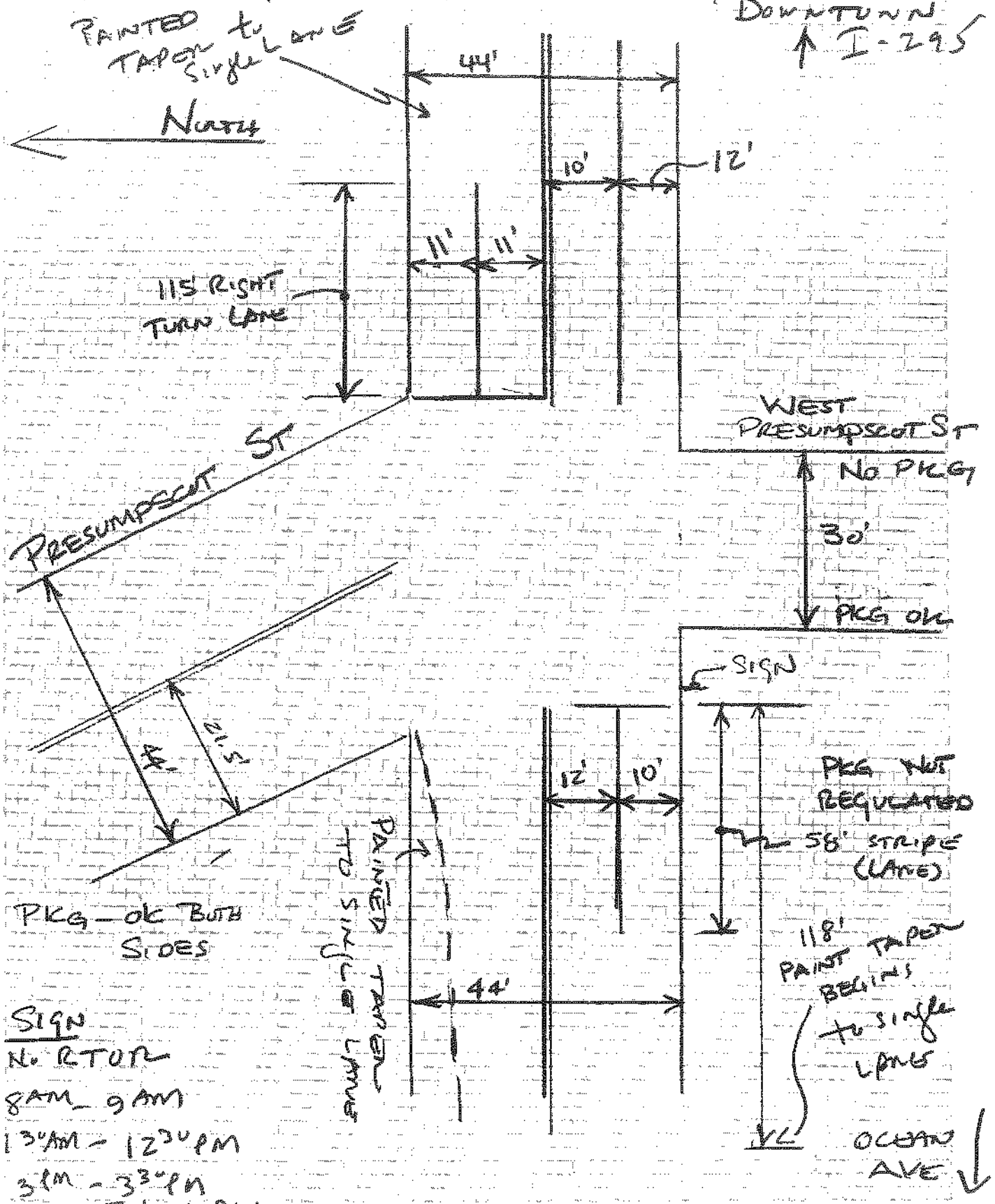


| PROJECT | COMP. BY | JOB NO. |
|---|---|---|
| OCTOBER CORP<br>FT. PUMPSCUT SI | JRLC | 00013.07 |
| | CHK. BY | DATE<br>7/01 |



7727410

| PROJECT | COMP. BY | JOB NO. |
|---|---|---|
| Pineland Presumpscot ST Traffic Study @ Warrington Ave | | 0013.07 |
| | CHK. BY | DATE 7/10/01 |

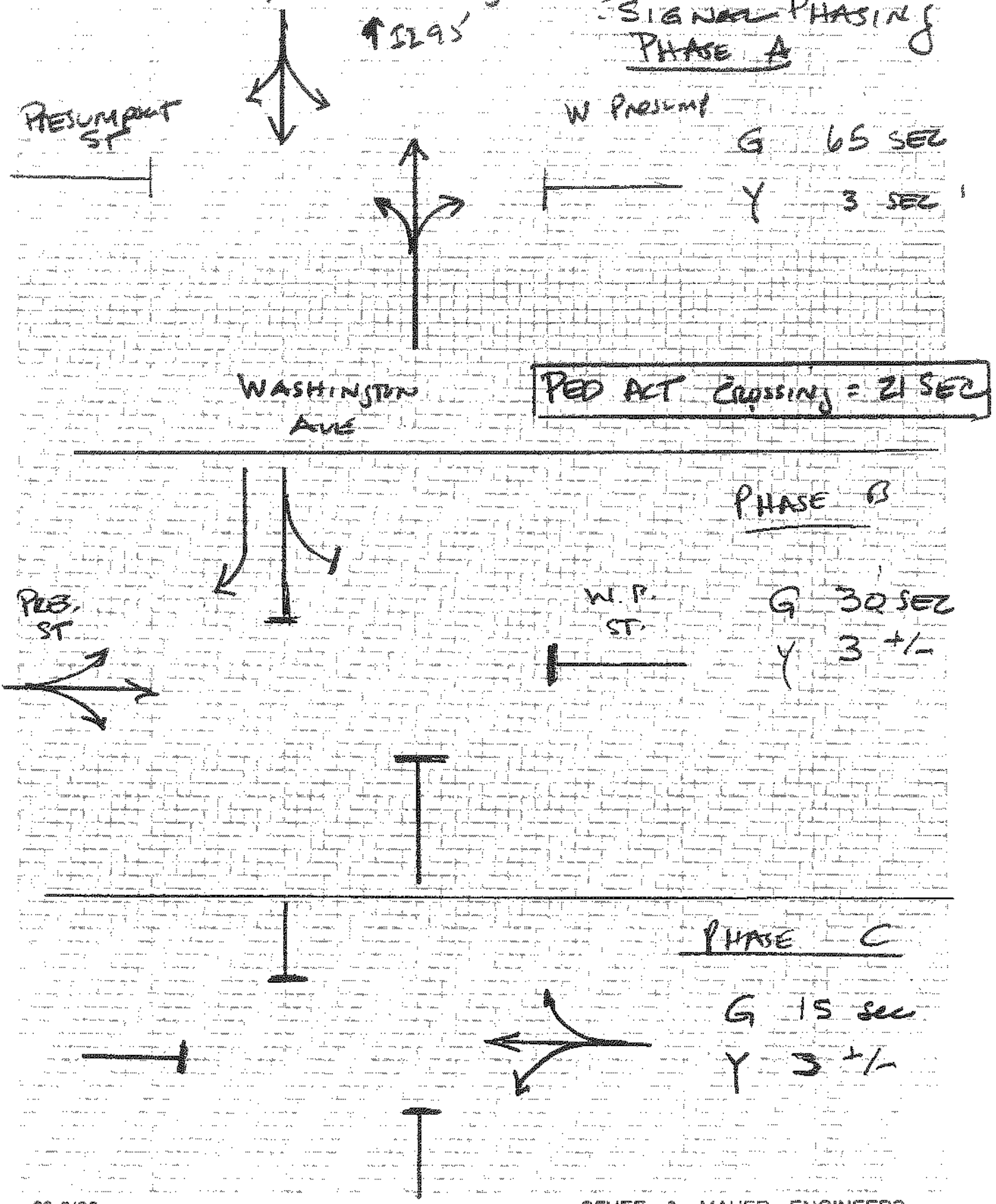





SEVEE & MAHER ENGINEERS

| PROJECT | COMP. BY | JOB NO. |
|---|---|---|
| PINOLENO-PRESUMPSCOT ST TRAFFIC STUDY @ WASHINGTON AVE | CHK. BY | DATE 7/10/01 |

- SIGNAL PHASING



SME
Sevee & Maher Engineers, Inc.
Waste Management and Hydrogeologic Consultants
Cumberland Center, Maine

# TELEPHONE MEMORANDUM

Job No. 00013.07

DATE: June 28, 2001

BETWEEN: Larry Ash, city of Portland Traffic Engineer

AND: John Kennedy, SME

SUBJECT: PRESUMPSCOT STREET – TRAFFIC IMPACTS

---

Explained to Larry that October Corporation had submitted a site plan application for an intramodal transfer facility on Presumpscot Street. Use to be for car/bus transfer of October Corporation/Boulos Properties employees to work in downtown Portland. Also, use for rail transportation for commuters from Portland, South Portland, and Cape Elizabeth to work in Pineland, New Gloucester. At this time, majority of usage would be bussing of commuter traffic to downtown.

Larry's Concerns.

1. Sight distance of project entrance (SME believes OK on this).

2. Ability of Presumpscot Street/Washington Avenue to handle additional traffic and/or change in turning movement. May be a simple matter of striping and modification of signal timing. Current Washington Avenue traffic is 20,000 vehicles per day. Recommends that a local traffic engineer review the intersection impact.

3. Also, elementary school is located on Presumpscot Street. However, there are crossing guides on Washington and Presumpscot Street.

4. Large number of trucks on Presumpscot Street.

5. Neighborhood is well organized.



4 Blanchard Road P.O. Box 85A Cumberland Center, ME 04021 (207)829-5016 FAX (207)829-5692

Finance Department

Duane G. Kline
Director

# CITY OF PORTLAND

October 23, 2002

Jennifer Baldwin
Maine Bank & Trust
P.O. Box 17510
Portland, ME 04112-8510

Re: October Corporation, Intermodal Transfer Facility @ 373 Presumpscot St.
Escrow Account #6270 dated October 15, 2001

Dear Ms. Baldwin:

This is to inform you that I am authorizing the release and return of the above-named escrow account to October Corporation, in the amount of $335,213.55 plus accrued interest.

If you have any questions or require further information, please call my assistant, Jennifer Babcock, at 874-8645.

Sincerely,

Kevin R. Markee

Kevin Markee
Treasury Director

KRM.jlb

pc: Jay Reynolds, Development Review Coordinator

CB Richard Ellis
Boulos Property Management

One Canal Plaza
Portland, ME 04101
207.871.1290 Tel
207.772.2647 Fax
www.boulos.com

June 7, 2002

Ms. Sarah Hopkins
Planning Department
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

RE: Intermodal Transfer Facility
373 Presumpscot Street
October Corporation

Dear Sarah:

Please consider this letter as a request for the release of the performance guarantee posted by October Corporation regarding the above referenced property. The escrow guarantee is in the amount of $335,213.55, and was executed on 10/16/01. I have enclosed a copy for your reference.

Regarding the requirement for a 10% Defect Guarantee, if one is required, will it be possible to reduce the amount of the existing guarantee by 90% and leave the balance 10% in place for that purpose?

Please let me know if you need any further information in order to process this request.

Sincerely,

Kim A. Farrar

KIM A. FARRAR
Development Coordinator

cc: Rick Donald

SITE PLAN/SUBDIVISION
PERFORMANCE GUARANTEE
ESCROW ACCOUNT
#6270

October 15, 2001

Alex Jaegerman
Director of Planning and Urban Development
City of Portland
389 Congress Street
Portland, Maine 04101

Re: Application of October Corporation for Intermodal Transfer Facility at 373 Presumpscot Street, Portland, Maine.

Maine Bank & Trust hereby certifies to the City of Portland that Maine Bank & Trust will hold the sum of Three Hundred Thirty Five Thousand Two Hundred and Thirteen Dollars and Fifty-five cents ($335,213.55) in an interest bearing account established with the Bank. This account shall be in the name of the City of Portland and shall represent the estimated cost of installing site improvements as depicted on the site plan approved on September 25, 2001 as required under Portland Code of Ordinances Chapter 14 §§499, 499.5, 525 and Chapter 25 §§46 through 65. It is intended to satisfy the Developer's obligation, under Portland Code of Ordinances Chapter 14 §§501, 502 and 525, to post a performance guarantee for the above referenced development.

Maine Bank & Trust will hold these funds as escrow agent for the benefit of the City subject to the following:

The City, through its Director of Planning and Urban Development and in his sole discretion, may draw against this Escrow Account by presentation of a draft in the event that:

1. the Developer has failed to satisfactorily complete by September 25, 2003 the work on the improvements contained within the site improvements approval dated September 25, 2001; or

2. the Developer has failed to deliver to the City a deed containing the metes and bounds description of any streets, easements or other improvements required to be deeded to the City; or

3. the Developer has failed to post the ten percent (10%) Defect Guarantee required by Portland Code of Ordinances Chapter 14 §§501 and 525; or

4. the Developer has failed to notify the City for inspections in conjunction with the installation of improvements noted in paragraph one.

It is a condition of this Escrow Agreement that it is deemed to be automatically extended without amendment for a period(s) of one year from the current expiration date hereof, or any future expiration date, unless within sixty (60) days prior to any expiration, Maine Bank & Trust notifies the City by certified mail (restricted delivery to Duane Kline, Director of Finance, City of Portland, 389 Congress Street, Portland, Maine 04101), that Maine Bank & Trust elects not to consider this Escrow Agreement renewed for any such additional period.

After all underground work has been completed and inspected to the satisfaction of the Department of Public Works and Planning, including but not limited to sanitary sewers, storm drains, catch basins, manholes, electrical conduits, and other required improvements constructed chiefly below grade, the City of Portland Director of Planning and Urban Development or its Director of Finance as provided in Chapter 14 §501 of the Portland Code of Ordinances, may authorize Maine Bank & Trust by written certification, to reduce the available amount of the escrowed money by a specified amount.

All costs associated with establishing, maintaining, and disbursing funds from the Escrow Account shall be borne by October Corporation.

This Escrow Account expires on:

1. September 25, 2003 or ninety days following Maine Bank & Trust's written notice of its expiration as detailed above; or

2. Maine Bank & Trust's receipt of written notification from the City of Portland that said work contained within the site improvements approval as required by the Portland Code of Ordinances Chapter 14 §§499, 499.5, 525 and Chapter 25 §46 through 65 has been completed in accordance with the City of Portland's specifications and Maine Bank & Trust's Escrow Agreement No. 6270 may be cancelled.

Very truly yours,

Maine Bank & Trust

Date: 10/16/01

By: _____
Its Duly Authorized Agent

Seen and Agreed to: October Corp.

By: _____
Owen W. Wells, President

Reviewed pursuant to Portland Code of Ordinances, Chapter 14 §§501, 525:

By: _____
Director of Planning and Urban Development

Date: _____

By: _____
Director of Finance

Date: 11-5-01

By: _____
Corporation Counsel

Date: _____

**From:** "Farrar, Kim" <KFarrar@Boulos.com>
**To:** 'Jay Reynolds' <JAYJR@ci.portland.me.us>
**Date:** Tue, Jul 23, 2002 4:10 PM
**Subject:** RE: intermodal facility/383presumpscot

Jay, thank you for getting back to me. I have a call in to White Brothers, who were the general contractors on this project for us, to go over the situation, and will get back to you shortly. Kim

-----Original Message-----
From: Jay Reynolds [mailto:JAYJR@ci.portland.me.us]
Sent: Tuesday, July 23, 2002 9:41 AM
To: KFarrar@Boulos.com
Cc: SH@ci.portland.me.us
Subject: intermodal facility/383presumpscot

I've spoken with Gary stockton, from bay electric, on the light fixture issue.

He stated that what was installed, is what was spec'd for the project. However, this conflicts with the drawing/detail of the fixture on the approved lighting plan.
We didn't really come to any resolve. He felt it wasn't any wrongdoing of his.
So, back to Boulos. I'll have to request, in writing that the applicant either replace the fixtures, or modify/tilt the existing fixtures so that they will be in compliance.

Thank you for your help.

Hi Kim,
The site looks great. White Bros., and whomever the landscaper was did a great job!

The one item is the lighting fixtures. This might be hard to explain, easy to see.....
the fixtures need to be 'cutoff' fixtures (which they are) and installed so that the lens is parrellel to the ground. They are sort of angled up a bit, allowing the light to glare out. This is a common issue in site development, although a small issue, is a concern. Hence, our lighting standards!
To ensure lighting requirements (glare and spillover), the fixtures need to be tilted down.
Thanks for your attention on this matter, and feel free to contact me if you have any questions or comments.

Once this is corrected, the defect guarantee can be submitted, and I can release the original letter of credit.

Thanks again.
Jay

Jay Reynolds
Development Review Coordinator
Department of Planning and Urban Development
City of Portland
207-874-8632
jayjr@ci.portland.me.us

CC: "Ureneck, Paul" <PUreneck@Boulos.com>

# White Bros. Inc.

95 Warren Avenue
Westbrook, Maine 04092
Telephone: (207) 854-9173
FAX: (207) 854-3809
whi1@earthlink.net

## FAX TRANSMITTAL

DATE: 7/30/02

TO: City of Portland

ATTN: Mr. Jay Reynolds

FROM: Mike White

PAGES (To include this cover sheet): 2

Jay, Please review the attached memo from Bennett Engineering & C.W.S., based on my review it confirms what we discussed the other day. I will assume this puts the issue to bed, if not please give Tom Bunos or myself a call.

Mike White

BENNETT ENGINEERING

CONSULTING ENGINEERS

Bennett Road, P.O. Box 297, Freeport, Maine 04032
Tel - (207) 865-9475
Fax - (207) 865-1800
Email - office@bennettengineering.net

## Memorandum

To: Curtis Walter Stewart Architects Date: 07/29/02

CC:

From: Will Bennett

Project: Portland Intermodal Transfer Facility

The Site lighting fixture specified and installed for the project mentioned above is Kim Model AR fixture with curved arm. The photometric isocurves indicated on the Site Plan E100 are accurate and based on this fixture. The design complies with the local site lighting ordinances in Portland. The fixture shown on the Pole Base Detail showing the side elevation of the lighting fixture with a straight mounting arm does not represent the specified fixture. The detail is shown primarily for information on the pole base construction and wiring.

**Department of Planning & Development**
Lee D. Urban, Director

# CITY OF PORTLAND

**Division Directors**
Mark B. Adelson
Housing & Neighborhood Services

Alexander Q. Jaegerman, AICP
Planning

John N. Lufkin
Ecomonic Development

October 10, 2002

Kim Farrar
Development Coordinator
CB Richard Ellis/Boulos Property Management
One Canal Plaza
Portland, ME 04101

RE: 383 Presumpscot Street Intermodal Facility

CBL: 420 A 001001

Dear: Ms. Farrar:

This letter is to confirm the revision to the approved plan of the project located at 383 Presumpscot Street. The approved revision includes use of the site as a snow storage facility. The revised plan has been reviewed and approved by the project review staff including representatives of the Planning, Public Works, Building Inspections, Fire and Parks Departments, with the following conditions:

If you have any questions regarding the revision please contact Sarah Hopkins at 874-8720.

Sincerely,

Sarah Hopkins for AQJ

Alexander Jaegerman
Planning Division Director

cc: Lee D. Urban, Planning and Development Department Director
Sarah Hopkins, Development Review Program Manager
√ Jay Reynolds, Development Review Coordinator
Marge Schmuckal, Zoning Administrator
Jodine Adams, Inspections
Larry Ash, Traffic Engineer
Tony Lombardo, Project Engineer
Eric Labelle, City Engineer
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Lt. Gaylen McDougall, Fire Prevention
Don Hall, Appraiser, Assessor's Office
Approval Letter File
Correspondence File

O:\PLAN\DEVREVW\PRESUMP383\REVISIONLETTER.DOC

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW CUSTODY*

Account Number: *60 00 6267 31 6*

Date: *SEPTEMBER 30, 2002*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

---

CITY OF PORTLAND
ATTN: ALEX JAEGERMAN
389 CONGRESS STREET
PORTLAND ME 04101

16270

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW CUSTODY*

Account Number: *60 00 6267 31 8*

Date: *SEPTEMBER 30, 2002*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

# *Statement Of Account*

**Contents**

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW CUSTODY*

Account Number: *60 00 6267 31 8*

Date: *SEPTEMBER 30, 2002*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

# *Summary of Assets*

| | Investment Cost Basis | Total Market Value | Est. Annual Income | Current Yield |
|---|---|---|---|---|
| **CASH** | | | | |
| INCOME CASH | 0.00 | 0.00 | | |
| PRINCIPAL CASH | 0.00 | 0.00 | | |
| **TOTAL CASH** | **0.00** | **0.00** | | |
| **CASH EQUIVALENTS** | | | | |
| MISC CASH EQUIV-TXBL | 33,521.35 | 33,521.35 | 577 | 1.72 |
| **TOTAL CASH EQUIVALENTS** | **33,521.35** | **33,521.35** | **577** | **1.72** |
| **GRAND TOTAL** | **33,521.35** | **33,521.35** | **577** | **1.72** |

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW CUSTODY*

Account Number: *60 00 6267 31 8*

Date: *SEPTEMBER 30, 2002*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

# *Review of Assets*

| Shares or Par Value | | Unit Market | Investment Cost Basis | Total Market Value | Est. Annual Income | Current Yield |
|---|---|---|---|---|---|---|
| | **CASH** | | | | | |
| | INCOME CASH | | 0.00 | 0.00 | | |
| | PRINCIPAL CASH | | 0.00 | 0.00 | | |
| | **TOTAL CASH** | | **0.00** | **0.00** | | |
| | **CASH EQUIVALENTS** | | | | | |
| | **MISC CASH EQUIV-TXBL** | | | | | |
| 33,521.35 | FEDERATED PRIME OBLIGATIONS FUND | 1.000 | 33,521.35 | 33,521.35 | 577 | 1.72 |
| | **TOTAL CASH EQUIVALENTS** | | **33,521.35** | **33,521.35** | **577** | **1.72** |
| | **GRAND TOTAL** | | **33,521.35** | **33,521.35** | **577** | **1.72** |
| | **YEAR TO DATE TOTALS** | | | | | |
| | TAX YEAR SHORT TERM GAIN | | | 0.00 | | |
| | TAX YEAR LONG TERM GAIN | | | 0.00 | | |

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW CUSTODY*

Account Number: *60 00 6267 31 8*

Date: *From SEPTEMBER 1, 2002 through SEPTEMBER 30, 2002*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

# *Receipts & Disbursements*

| Date | | Income Cash | Principal Cash | Investment Cost Basis |
|---|---|---|---|---|
| | **BEGINNING BALANCES** | 0.00 | 0.00 | 0.00 |
| 09/30/02 | CASH RECEIPT - INITIAL FUNDING<br>TRANSFER FROM MAINE BK & TR C/A 00561134 | | 33,521.35 | |
| 09/30/02 | PURCHASED $ 33521.35<br>FEDERATED PRIME OBLIGATIONS FUND | | -33,521.35 | 33,521.35 |
| | **ENDING BALANCES** | 0.00 | 0.00 | 33,521.35 |

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW CUSTODY*

Account Number: *60 00 6267 31 8*

Date: *From SEPTEMBER 1, 2002 through SEPTEMBER 30, 2002*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

# *Summary Statement of Transactions*

| | Income Cash | Principal Cash | Investment Cost Basis |
|---|---|---|---|
| **BEGINNING BALANCES** | 0.00 | 0.00 | 0.00 |
| **RECEIPTS** | | | |
| CONTRIBUTIONS | | 33,521.35 | |
| **TOTAL RECEIPTS** | 0.00 | 33,521.35 | 0.00 |
| **DISBURSEMENTS** | | | |
| PURCHASES OF ASSETS | | -33,521.35 | 33,521.35 |
| **TOTAL DISBURSEMENTS** | 0.00 | -33,521.35 | 33,521.35 |
| **ENDING BALANCES** | 0.00 | 0.00 | 33,521.35 |

**Department of Planning & Development**
Lee D. Urban, Director

**CITY OF PORTLAND**

**Division Directors**
Mark B. Adelson
Housing & Neighborhood Services

Alexander Q. Jaegerman, AICP
Planning

John N. Lufkin
Ecomonic Development

**TO:** Duane Kline, Finance Department

**FROM:** Alexander Jaegerman, Planning Division Director

**DATE:** October 7, 2002

**SUBJECT:** Request for Release of Performance Guarantee
Intermodal Transfer Facility 383 Presumpscot St.
(October Corporation)
ID# 2001-0160 Lead CBL#420-A-002

Please release the Escrow Account # 6270 in the amount of $335,213.55 for the Intermodal Facility at 383 Presumpscot Street.

**Approved:**

Alexander Jaegerman
Planning Division Director

cc: Sarah Hopkins, Development Review Services Manager
Jay Reynolds, Development Review Coordinator
Todd Merkle, Public Works
Code Enforcement
file

O:\PLAN\CORRESP\DRC\PERFORM\383PRESUMPSCOT1.DOC

# DEVELOPMENT REVIEW COORDINATOR
# POST APPROVAL PROJECT CHECKLIST

Date: 4/14/10

Project Name: 383 Presumpscot Str.

Project Address: Subdivision - After the Fact

| | |
|---|---|
| Site Plan ID Number: | 10-98900001 |
| Planning Board/Authority Approval Date: | 3/23/10 |
| Site Plan Approval Date: | 3/23/10 |
| Performance Guarantee Accepted: | 7/21/10 |
| Inspection Fee Paid: | 6/17/10 |
| Infrastructure Contributions Paid: | N/A |
| Amount of Disturbed Area in SF or Acres: | < 1 Acre |
| MCGP/Chapter 500 Stormwater PBR: | < 1 Acre |
| Plans/CADD Drawings Submitted: | ? |
| Pre-Construction Meeting: | 8/20/10 |
| Conditions of Approval Met: | 8/27/10 |
| As-Builts Submitted: | |
| Public Services Sign Off: | 9/21/10 |
| Certificate of Occupancy Memo Processed: (Temporary or Permanent) | 10/27/10 |
| Performance Guarantee to Defect Guarantee: | 10/27/10 |
| Defect Guarantee Released: | 9/26/11 |

Memorandum
Department of Planning and Urban Development
Planning Division

**TO:** Ellen Sanborn, Finance Director

**FROM:** Alexander Jaegerman, Planning Division Director

**DATE:** 11-26-11

**RE:** Request for Release of Defect Guarantee

**Project Name:** AFTER THE FACT SUBDIVISION
**Project Address:** 383 PRESUMPSCOT STREET
**Applicant:** TIMOTHY SANDERS
**PROJECT ID:** 10-98900001
**CBL:** 420 A 001001

Please release the Defect Guarantee **#710-0000-233.91-33** for the **AFTER THE FACT SUBDIVISION**, at **383 PRESUMPSCOT STREET**.

Remaining Balance **$1,611.00**

**Approved:**
Alexander Jaegerman
Planning Division Director

cc: Barbara Barhydt, Development Review Services Manager
Philip DiPierro, Development Review Coordinator

Memorandum
Department of Planning and Urban Development
Planning Division

**TO:** Ellen Sanborn, Finance Director

**FROM:** Alexander Jaegerman, Planning Division Director

**DATE:** 10-27-10

**RE:** Request for Reduction of Performance Guarantee to Defect Guarantee

**Project Name:** AFTER THE FACT SUBDIVISION **PROJECT ID:** 10-98900001
**Project Address:** 383 PRESUMPSCOT STREET **CBL:** 420 A 001001
**Applicant:** TIMOTHY SANDERS

Please reduce the Performance Guarantee **#710-0000-233.91-33** for the **AFTER THE FACT SUBDIVISION,** at **383 PRESUMPSCOT STREET** to the Defect Guarantee.

Original Amount **$16,110.00**

**This Reduction $14,499.00**

Remaining Balance **$1,611.00**

This is the reduction to **a one year defect guarantee** for this project.

**Approved:**
Alexander Jaegerman
Planning Division Director

cc: Barbara Barhydt, Development Review Services Manager
Philip DiPierro, Development Review Coordinator

Memorandum
Department of Planning and Urban Development
Planning Division

**TO:** Inspections Division

**FROM:** Philip DiPierro

**DATE:** 10-27-10

**RE:** Permanent Certificate of Occupancy

**Project Name:** Presumpscot Street - 383; After The Fact Review 3 Lot Subdivision; Timothy Sanders
**Project ID:** 10-98900001
**Project Address:** 383 Presumpscot St **CBL:** 420 - A-001-001

**Applicant:** Timothy Sanders

After visiting the site, I have the following comments:

Site work complete

At this time, **I recommend issuing a permanent Certificate of Occupancy.**

cc: Barbara Barhydt, Development Review Services Manager
Tammy Munson, Inspections Division Director

**Planning & Urban Development Department**
Penny St. Louis Littell, Director

**Planning Division**
Alexander Jaegerman, Director

**MARCH 29, 2010**

| **APPLICANT:** | **CONSULTANT:** |
|---|---|
| Timothy Sanders | Chris Michaud, SGC Engineering |
| 383 Presumpscot Street | 501 County Road |
| Portland ME 04103 | Westbrook, ME 04092 |

| | |
|---|---|
| **Project Name:** | **383 Presumpscot Street, After The Fact Review Subdivision** |
| **Project ID:** | 10-98900001 |
| **CBL:** | 420 - A-001-001 |
| **Project Address:** | 383 PRESUMPSCOT ST |
| **Planner** | Erick Giles, AICP, LEED AP |

Dear **Mr. Sanders**:

On **March 23, 2010**, the Portland Planning Board considered the After The Fact Review for the three lot subdivision at 383 Presumpscot Street. The Planning Board reviewed the proposal for conformance with the standards of the Subdivision Ordinance. The Planning Board voted **7-0** to approve the application with the following conditions as presented below.

i. On September 25, 2001 the Planning Board approved the development of an intermodal storage facility. Any reuse of the site requires the applicant to submit a change of use review application to be reviewed by the Zoning Administrator.

ii. The applicant must use the City's standard sidewalk details for a Collector when installing the bituminous sidewalk and granite curbing on Presumpscot Street. The proposed sidewalk shall drain from the back of the walk to the street.

iii. The applicant must locate the survey lot pin on the road right of way next to the driveway so the location of the sidewalk can be established.

iv. The applicant shall saw cut the driveway and remove the corrugated metal culvert. If the culvert continues beyond the driveway, the pipe shall be saw cut at the edge of the driveway at the existing sidewalk and sealed water tight. Replace the driveway gravels and pave to the current driveway pavement thickness.

v. The applicant shall arrange with CMP to reset the utility pole guy wire with a support arm to allow construction of the proposed sidewalk.

vi. Prior to the release of the recording plat the applicant shall submit to the Planning Authority evidence of compliance with Sec. 24-36 of Ch. 24 Sewers of the Portland Code of Ordinances.

The approval is based on the submitted plans and the findings related to site plan and subdivision review standards as contained in Planning Report #3-10 for application **Subdivision #10-98900001** which is attached.

**STANDARD CONDITIONS OF APPROVAL**

Please note the following standard conditions of approval and requirements for all approved subdivision plans:

1. A revised recording plat listing all conditions of subdivision approval must be submitted for review and signature prior to the issuance of a performance guarantee.

2. Pursuant to 30-A MRSA section 4406(B)(1), any waiver must be specified on the subdivision plan or outlined in a notice and the plan or notice must be recorded in the Cumberland County Registry of Deeds within 90 days of the final subdivision approval).

3. The above approvals do not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Inspection Division.

4. A performance guarantee covering the site improvements as well as an inspection fee payment of 2.0% of the guarantee amount and seven (7) final sets of plans must be submitted to and approved by the Planning Division and Public Services Dept. prior to the release of the subdivision plat for recording at the Registry of Deeds and prior to the release of a building permit or street opening permit. If you need to make any modifications to the approved plans, you must submit a revised subdivision application for staff review and approval.

5. Final sets of plans shall be submitted digitally to the Planning Division, on a CD or DVD, in AutoCAD format (*,dwg), release AutoCAD 2005 or greater.

6. Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to the Public Services Dept. prior to the issuance of a certificate of occupancy.

7. The subdivision approval is valid for three (3) years.

8. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

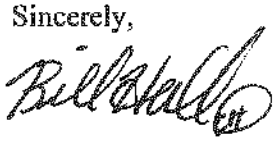
9. Prior to construction, a pre-construction meeting shall be held at the project site with the contractor, development review coordinator, Public Service's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

10. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

Philip DiPierro, Development Review Coordinator, must be notified five (5) working days prior to date required for final site inspection. The Development Review Coordinator can be reached at 874-8632. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If you have any questions, please contact **Erick Giles** at **207-874-8723** or **egiles@planning.gov**

Sincerely,



Bill Hall, Chair
Portland Planning Board

Attachments:
1. PB Report #3-10
2. Performance Guarantee Packet

**Electronic Distribution:**
Penny St. Louis Littell, Director of Planning and Urban Development
Alexander Jaegerman, Planning Division Director
Barbara Barhydt, Development Review Services Manager
Eric Giles, AICP Planner
Philip DiPierro, Development Review Coordinator
Marge Schmuckal, Zoning Administrator
Tammy Munson, Inspections Division Director
Gayle Guertin, Inspections Division
**Hard Copy**: Project File

SHAW BROTHERS CONSTRUCTION, INC.
511 MAIN ST., P.O. BOX 69 GORHAM, ME 04038
(207) 839-2552 Fax (207) 839-6239

# PROPOSAL

| PROPOSAL SUBMITTED TO: | CC: | DATE: |
|---|---|---|
| Tim Sanders | File | 11/16/2009 |
| ADDRESS: | JOB NAME: 383 Presumpscot Street | FAX: |
| CITY, STATE, AND ZIP: Portland, Maine 04101 | JOB LOCATION: Portland | PHONE: (207) 798-2766 |
| ATTN: Tim Sanders | DATE OF PLANS STAMP: N/A | tsanders@maine.rr.com |

Shaw Brothers Construction, Inc. will furnish all necessary labor, equipment and materials to install approximately 125 lineal feet of granite curb and bituminous sidewalk to match the curb and sidewalk of the adjacent lots. All work to be in accordance with City of Portland standards.

***Scope of Work:***

Dig Safe Notifications
Traffic Control as required
Sawcut pavement as required
Install 124+/- lineal feet of granite curb lf of 15" pipe
Install 5' wide x 124 lf of sidewalk ( 2" pavement, 12" Type A gravel)
Install 7' wide grass esplanade
Abandon 8" storm drain pipe
Restore all disturbed areas
Cleanup/Demobilize

| | |
|---|---|
| Street Opening Fees | $2,050.00 |
| Granite Curb & Sidewalk | $13,110.00 |
| Restore (Loam & Seed) | $950.00 |
| Total | $16,110.00 |

***Exclusions:***

Performance and Payment Bond
Federal, State and Local permit fees (street opening fees included)
Relocation of Utility Pole Guy Wires
Trees (if required)

**We Propose** hereby to furnish material, labor and equipment to complete the work described above for the sum of: $ 16,110.00

---------- **Sixteen thousand one hundred ten dollars** ----------

Payment to be made as follows: Net 30 days

Interest at 1.5 percent per month on accounts over 30 days. Collection costs and reasonable attorney's fees will be added to account.

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. All alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents, or delays beyond our control. Owner to carry fire, tornado, and other necessary insurance. Our workers are fully covered by Workers Compensation Insurance.

Authorized Signature *Mark Barnes*

NOTE: This proposal may be withdrawn by us if not accepted within 30 days.

**Acceptance of Proposal-** The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to the work as specified. Payment will be made as outlined above.

Signature _____

Date of Acceptance: _____

Signature _____

# CITY OF PORTLAND, MAINE

## PLANNING BOARD



October 8, 2001

Robert Arsenault
Sevee & Maher Engineers, Inc.
4 Blanchard Road
Cumberland, ME 04021

re: 383 Presumpscot Street Intermodal Facility CBL: 420 A001001

Dear Mr. Arsenault:

On September 25, 2001 the Portland Planning Board voted unanimously (7-0) to approve your application to for an intermodal facility to be constructed in three phases at 383 Presumpscot Street. The Board found that the application met the standards of the Site Plan Ordinance of the Land Use Code and Chapters 500 and 502 of the Maine DEP Regulations.

The approval was granted for the project with the following conditions:

> That an executed drainage maintenance agreement for the Vortechnics unit be provided by the applicant and approved by Corporation Counsel, prior to commencement of site work.

The approval is based on the submitted site plan and the findings related to site plan review standards as contained in Planning Report # 41-01, which is attached.

Given the approved phasing of this project, a separate performance guarantee and inspection fee will be issued for each separate phase. No work may commence on a subsequent phase until all work has been completed on the previous phase.

Please note the following provisions and requirements for all site plan approvals:

1. A performance guarantee covering the site improvements as well as an inspection fee payment of 2.0% of the guarantee amount and 7 final sets of plans must be submitted to and approved by the Planning Division and Public Works prior to the release of the building permit. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

2. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the expiration date.

3. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

4. Prior to construction, a preconstruction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the preconstruction meeting.

5. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

The Development Review Coordinator 874-8632 must be notified five (5) working days prior to date required for final site inspection. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact the Planning Staff.

Sincerely,

Jaimey Caron, Chair
Portland Planning Board

cc: Alexander Jaegerman, Chief Planner
Sarah Hopkins, Development Review Services Manager
P. Samuel Hoffses, Building Inspector
Marge Schmuckal, Zoning Administrator
Tony Lombardo, Project Engineer
Jay Reynolds, Development Review Coordinator
William Bray, Director of Public Works
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Lt. Gaylen McDougall, Fire Prevention
Inspection Department
Lee Urban, Director of Economic Development
Don Hall, Appraiser, Assessor's Office
Susan Doughty, Assessor's Office
Approval Letter File

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW*

Account Number: *60 00 6270 31 2*

Date: *DECEMBER 31, 2001*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

CITY OF PORTLAND
ATTN: ALEX JAEGERMAN
389 CONGRESS STREET
PORTLAND ME 04101

16270

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW*

Account Number: *60 00 6270 31 2*

Date: *DECEMBER 31, 2001*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

# *Statement Of Account*

**Contents**

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW*

Account Number: *60 00 6270 31 2*

Date: *DECEMBER 31, 2001*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

# *Summary of Assets*

| | Investment Cost Basis | Total Market Value | Est. Annual Income | Current Yield |
|---|---|---|---|---|
| **CASH** | | | | |
| INCOME CASH | 84.87 | 84.87 | | |
| PRINCIPAL CASH | -84.87 | -84.87 | | |
| **TOTAL CASH** | **0.00** | **0.00** | | |
| **CASH EQUIVALENTS** | | | | |
| MISC CASH EQUIV-TXBL | 335,298.42 | 335,298.42 | 7,175 | 2.14 |
| **TOTAL CASH EQUIVALENTS** | **335,298.42** | **335,298.42** | **7,175** | **2.14** |
| **GRAND TOTAL** | **335,298.42** | **335,298.42** | **7,175** | **2.14** |

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW*

Account Number: *60 00 6270 31 2*

Date: *From NOVEMBER 1, 2001 through DECEMBER 31, 2001*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

# *Receipts & Disbursements*

| Date | | Income Cash | Principal Cash | Investment Cost Basis |
|---|---|---|---|---|
| | **BEGINNING BALANCES** | **0.00** | **0.00** | **0.00** |
| 11/27/01 | CASH RECEIPT - INITIAL FUNDING<br>TRANSFER FROM ACCT 5249 LIBRA FOUNDATION | | 335,213.55 | |
| 11/27/01 | PURCHASED $ 335213.55<br>FEDERATED PRIME OBLIGATIONS FUND | | -335,213.55 | 335,213.55 |
| 12/04/01 | DIVIDEND RECEIVED<br>FEDERATED PRIME OBLIGATIONS FUND | 84.87 | | |
| 12/05/01 | PURCHASED $ 84.87<br>FEDERATED PRIME OBLIGATIONS FUND | | -84.87 | 84.87 |
| | **ENDING BALANCES** | **84.87** | **-84.87** | **335,298.42** |

For the Account of: *OCTOBER CORP/CITY OF PORTLAND ESCROW*

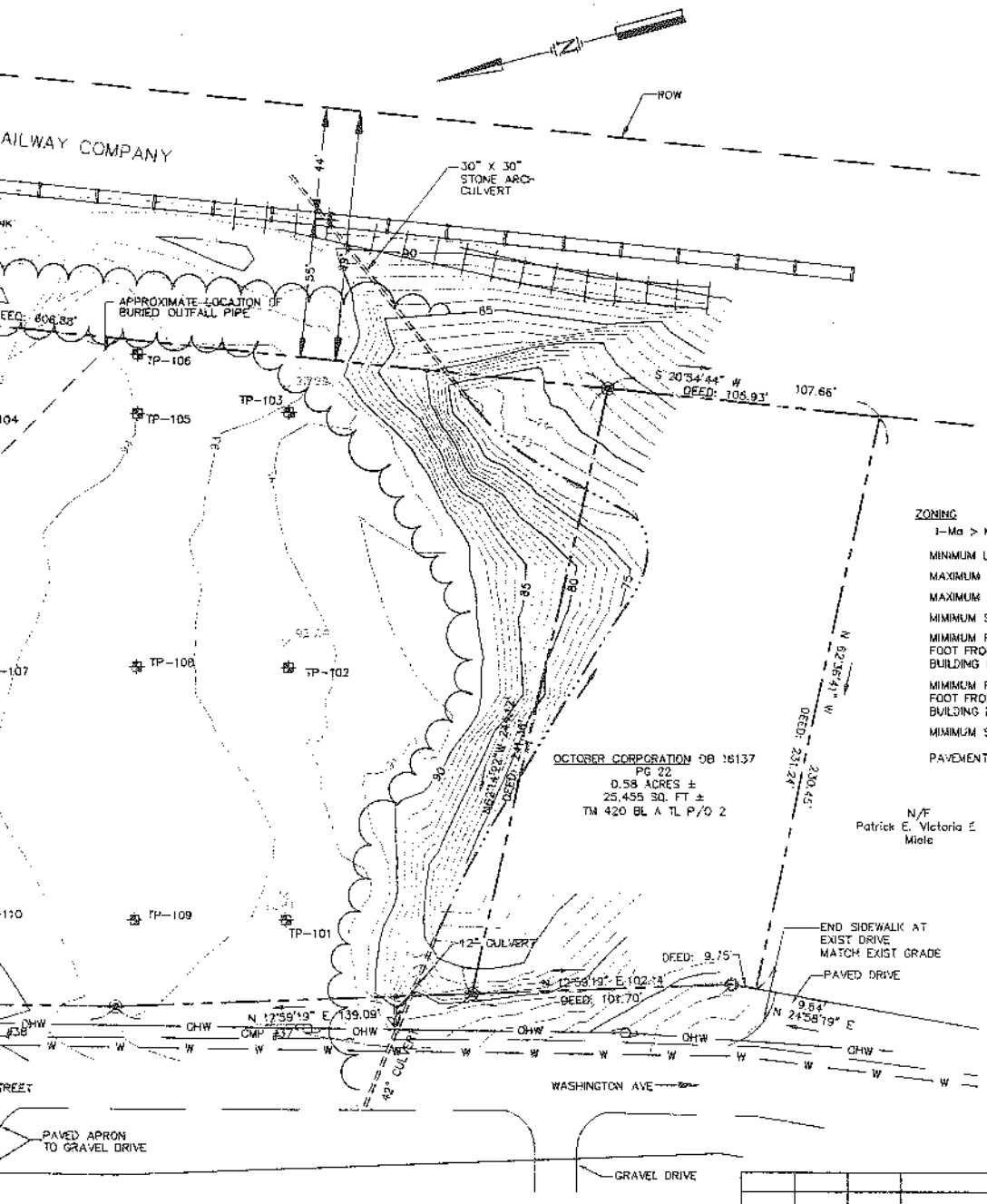
Account Number: *60 00 6270 31 2*

Date: *From NOVEMBER 1, 2001 through DECEMBER 31, 2001*

**MAINE BANK & TRUST**
P.O. Box 17510, 467 Congress St.
Portland, Maine 04112
207-828-3000

# *Summary Statement of Transactions*

| | Income Cash | Principal Cash | Investment Cost Basis |
|---|---|---|---|
| **BEGINNING BALANCES** | **0.00** | **0.00** | **0.00** |
| **RECEIPTS** | | | |
| CONTRIBUTIONS | | 335,213.55 | |
| ORDINARY DIVIDENDS | 84.87 | | |
| **TOTAL RECEIPTS** | **84.87** | **335,213.55** | **0.00** |
| **DISBURSEMENTS** | | | |
| PURCHASES OF ASSETS | | -335,298.42 | 335,298.42 |
| **TOTAL DISBURSEMENTS** | **0.00** | **-335,298.42** | **335,298.42** |
| **ENDING BALANCES** | **84.87** | **-84.87** | **335,298.42** |




ZONING

I-Ma > MODERATE IMPACT INDUSTRIAL (OFF PENINSULA)

MINIMUM LOT SIZE: NONE

MAXIMUM IMPERVIOUS SURFACE RATIO: SEVENTY-FIVE (75) PERCENT

MAXIMUM BUILDING HEIGHT: FORTY-FIVE (45) FEET.

MINIMUM SIDE YARDS: TWENTY-FIVE (25) FEET.

MINIMUM REAR YARDS: EACH STRUCTURE SHALL BE SET BACK ONE (1) FOOT FROM THE REAR PROPERTY LINE FOR EACH ONE (1) FOOT OF BUILDING HEIGHT, UP TO TWENTY-FIVE (25) FEET.

MINIMUM FRONT YARD: EACH STRUCTURE SHALL BE SET BACK ONE (1) FOOT FROM THE FRONT PROPERTY LINE FOR EACH ONE (1) FOOT OF BUILDING HEIGHT.

MINIMUM STREET FRONTAGE: SIXTY (60) FEET.

PAVEMENT SETBACK FROM LOT BOUNDARIES: TEN (10) FEET.

| REV. | BY | DATE | STATUS |
|---|---|---|---|
| | | 8/17/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP FOR SITE PLAN APPROVAL |
| | | 6/26/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP |

# OCTOBER CORPORATION
# INTERMODAL TRANSFER FACILITY
# PRESUMPSCOT STREET
# PORTLAND, MAINE

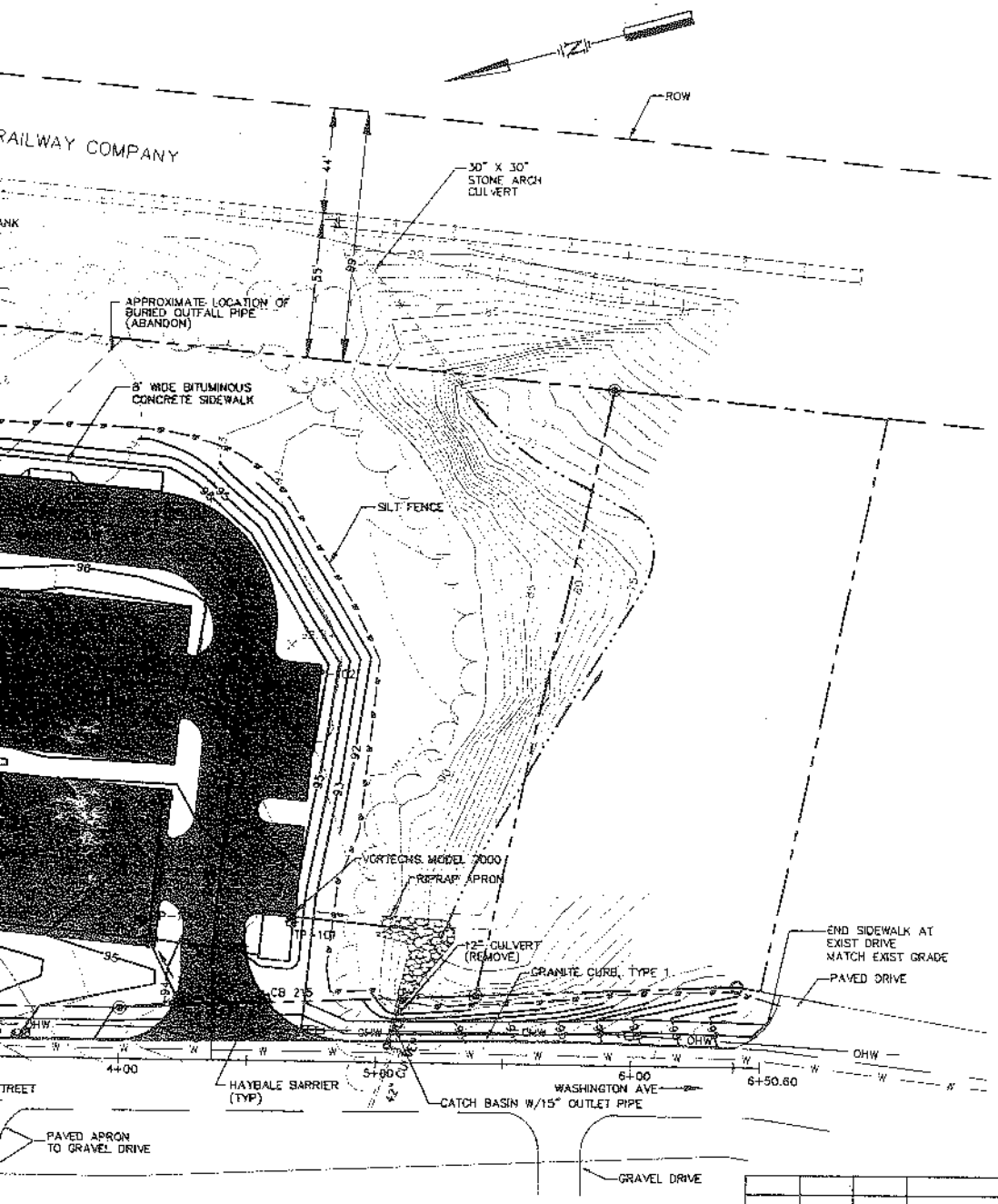
## EXISTING CONDITIONS PLAN


SME
Sevee & Maher Engineers, Inc.
Consulting Engineers
Cumberland Center, Maine


| | |
|---|---|
| DESIGN BY: | JRK |
| DRAWN BY: | SISK |
| DATE: | 5/04/01 |
| LMN: | EXCON |
| PCP: | EXCON |

JOB NO. 00013.07 DWG FILE FINALSITEPLAN

C-100




NOTES:

1. SEE DRAWING E-100 FOR SITE LIGHTING.
2. SEE DRAWING L-100 AND L-101 FOR LANDSCAPE PLAN AND DETAILS.
3. ALL CURB RUNS SHALL BEGIN AND END WITH A 6" GRANITE TIP DOWN. SEE DETAIL, DRAWING C-300.

15 0 30 60 FEET

LEGEND

- 95 — INDEX CONTOUR (EXISTING)
- 93 — INTERMEDIATE CONTOUR (EXISTING)
- 83 — FINAL GRADE CONTOUR
- PROPERTY LINE
- EDGE OF TRAVELED WAY
- TP-108 TEST PIT
- EXISTING TREE LINE
- EXISTING BUILDING
- STREAM WITH DIRECTION OF FLOW

| REV. | BY | DATE | STATUS |
|---|---|---|---|
| | | 8/17/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP FOR SITE PLAN APPROVAL |
| | | 6/28/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP |

STATE OF MAINE JOHN R. KELLY 8107 REGISTERED PROFESSIONAL ENGINEER

# OCTOBER CORPORATION
# INTERMODAL TRANSFER FACILITY
# PRESUMPSCOT STREET
# PORTLAND, MAINE

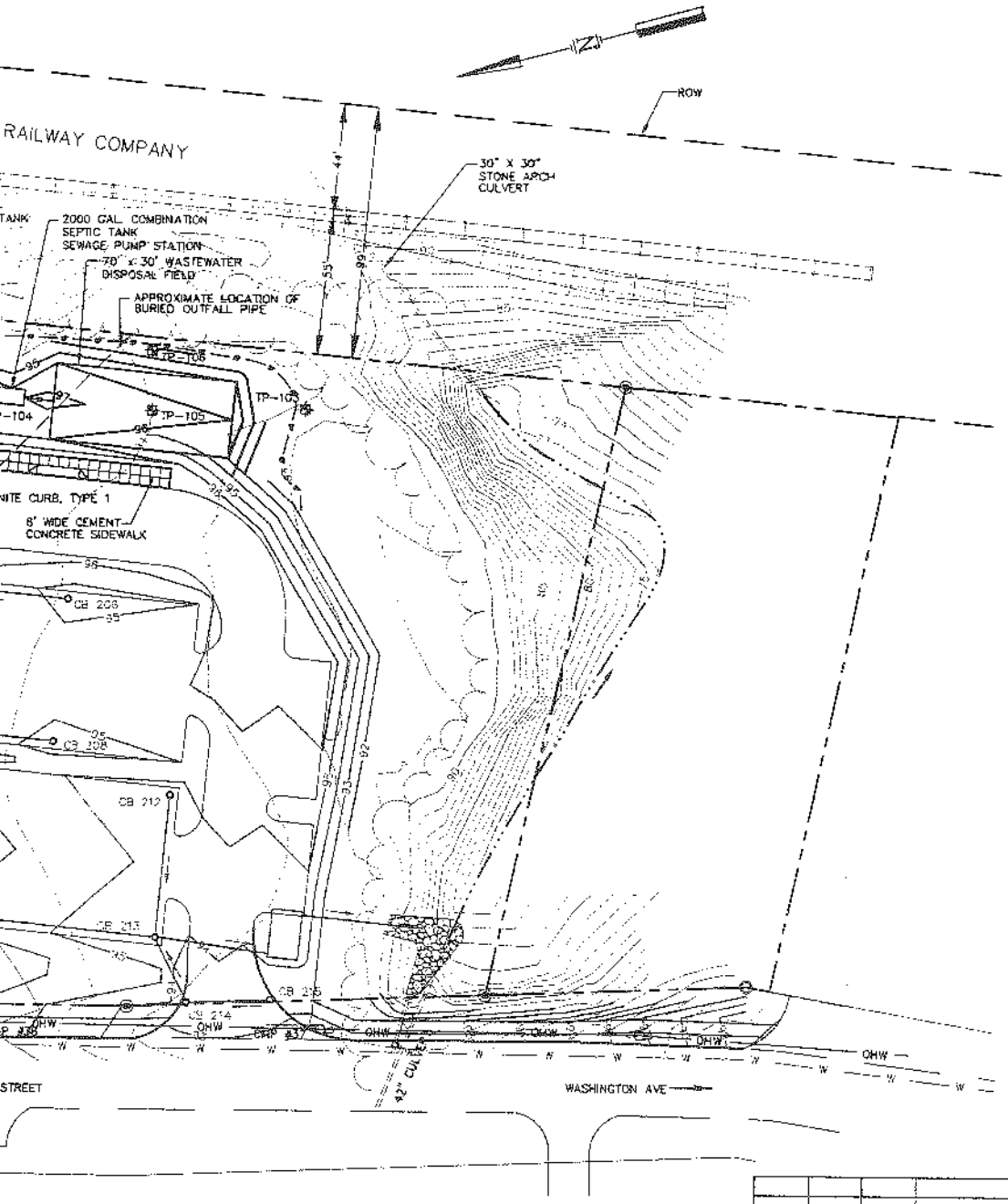
## PHASE I
## FINAL GRADING PLAN

SME
Sevee & Maher Engineers, Inc.
Consulting Engineers
Cumberland Center, Maine

| | |
|---|---|
| DESIGN BY: | JRK |
| DRAWN BY: | BISK |
| DATE: | 5/04/01 |
| LMN: | PH1-FINGRADE |
| PCP: | PH1-FINGRADE |

JOB NO. 00013.07 DWG FILE FINALSITEPLAN

C-101




NOTES:

1. SEE DRAWING A-100 FOR BUILDING SECTION AND ELEVATION.
2. SEE DRAWING E-100 FOR SITE LIGHTING.
3. SEE DRAWING L-100 AND L-101 FOR LANDSCAPE PLAN AND DETAILS.

15 0 30 60 FEET

LEGEND

- 85 INDEX CONTOUR (EXISTING)
- 84 INTERMEDIATE CONTOUR (EXISTING)
- 83 FINAL GRADE CONTOUR
- PROPERTY LINE
- EDGE OF TRAVELED WAY
- TP-108 TEST PIT
- EXISTING TREE LINE
- EXISTING BUILDING
- STREAM WITH DIRECTION OF FLOW

| REV. | BY | DATE | STATUS |
|---|---|---|---|
| | | 8/17/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP FOR SITE PLAN APPROVAL |
| | | 6/26/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP |

STATE OF MAINE PETER J. MORRELL 10901 REGISTERED PROFESSIONAL ENGINEER

OCTOBER CORPORATION
INTERMODAL TRANSFER FACILITY
PRESUMPSCOT STREET
PORTLAND, MAINE

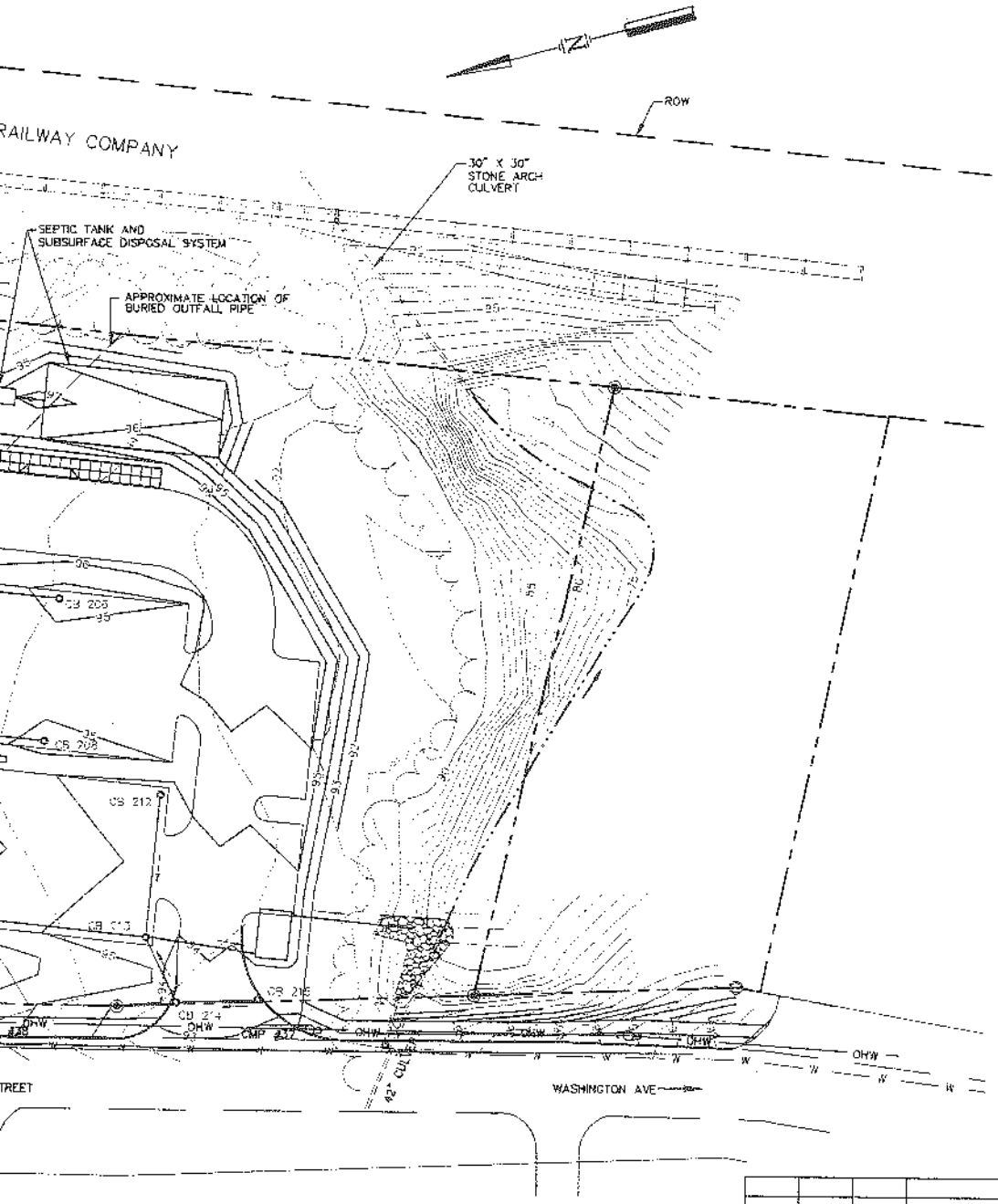
PHASE II
FINAL GRADING PLAN

SME
Sevee & Maher Engineers, Inc.
Consulting Engineers
Cumberland Center, Maine

| | |
|---|---|
| DESIGN BY: | JRK |
| DRAWN BY: | BJSK |
| DATE: | 5/04/01 |
| LMN: | PH2-FINGRADE |
| PCP: | PH2-FINGRADE |

JOB NO. 00013.07 DWG FILE FINALSITEPLAN

C-102




NOTES:

1. SEE DRAWING E-100 FOR SITE LIGHTING.
2. SEE DRAWING L-100 AND L-101 FOR LANDSCAPE PLAN AND DETAILS.
3. ALL CURB RUNS SHALL BEGIN AND END WITH A 6" GRANITE TIP DOWN. SEE DETAIL, DRAWING C-300.
4. ADJUST CATCH BASINS TO GRADE AS FOLLOWS:

| CB# | EXIST RIM EL. | PROPOSED RIM EL. |
|---|---|---|
| 201 | 95.0 | 96.0 |
| 202 | 95.0 | 96.9 |
| 203 | 97.0 | 97.9 |

15 0 30 60 FEET

LEGEND

- 85 — INDEX CONTOUR (EXISTING)
- 83 — INTERMEDIATE CONTOUR (EXISTING)
- 83 — FINAL GRADE CONTOUR
- PROPERTY LINE
- EDGE OF TRAVELED WAY
- TP-108 TEST PIT
- EXISTING TREE LINE
- EXISTING BUILDING
- STREAM WITH DIRECTION OF FLOW

| REV. | BY | DATE | STATUS |
|---|---|---|---|
| | | 8/17/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP FOR SITE PLAN APPROVAL |
| | | 6/26/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP |

OCTOBER CORPORATION
INTERMODAL TRANSFER FACILITY
PRESUMPSCOT STREET
PORTLAND, MAINE

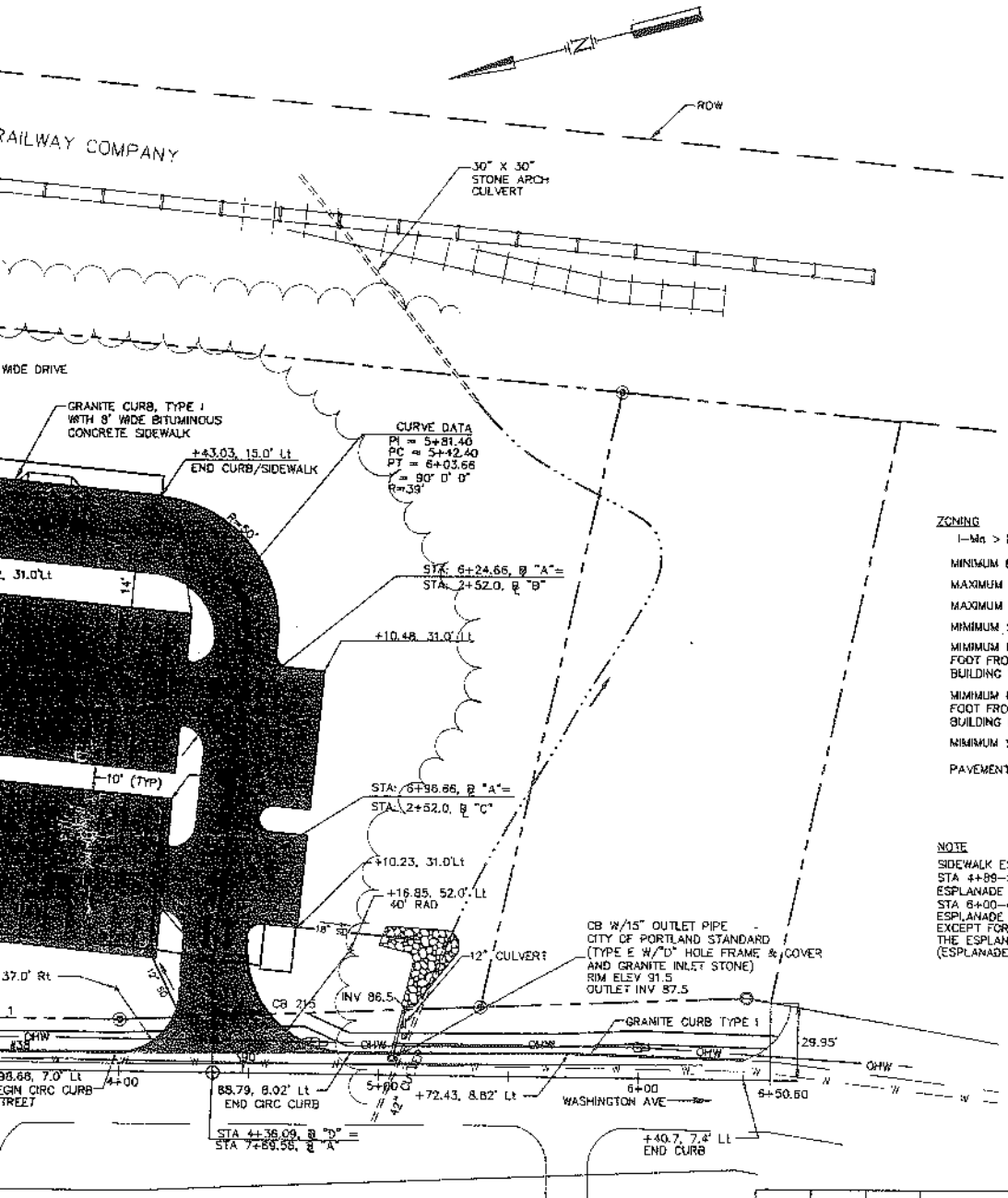
PHASE III
FINAL GRADING PLAN

SME
Sevee & Maher Engineers, Inc.
Consulting Engineers
Cumberland Center, Maine

DESIGN BY: JRK
DRAWN BY: DISK
DATE: 5/04/01
LMN: PH3-FINGRADE
PCP: PH3-FINGRADE

JOB NO. 00013.07 DWG FILE FINALSITEPLAN

C-103




ZONING

I-bln > MODERATE IMPACT INDUSTRIAL (OFF PENINSULA)

MINIMUM LOT SIZE: NONE

MAXIMUM IMPERVIOUS SURFACE RATIO: SEVENTY-FIVE (75) PERCENT

MAXIMUM BUILDING HEIGHT: FORTY-FIVE (45) FEET.

MINIMUM SIDE YARDS: TWENTY-FIVE (25) FEET.

MINIMUM REAR YARDS: EACH STRUCTURE SHALL BE SET BACK ONE (1) FOOT FROM THE REAR PROPERTY LINE FOR EACH ONE (1) FOOT OF BUILDING HEIGHT, UP TO TWENTY-FIVE (25) FEET.

MINIMUM FRONT YARD: EACH STRUCTURE SHALL BE SET BACK ONE (1) FOOT FROM THE FRONT PROPERTY LINE FOR EACH ONE (1) FOOT OF BUILDING HEIGHT.

MINIMUM STREET FRONTAGE: SIXTY (60) FEET.

PAVEMENT SETBACK FROM LOT BOUNDARIES: TEN (10) FEET.

NOTE

SIDEWALK ESPLANADE
STA 4+89-STA 5+72
ESPLANADE WIDTH=3'
STA 6+00-6+50±
ESPLANADE WIDTH=5'
EXCEPT FOR TRANSITION AREAS TO CHANGE WIDTH. THE ESPLANADE WILL BE 8' WIDE
(ESPLANADE WIDTHS INCLUDE CURBING)

CATCH BASIN SCHEDULE

| CB NO. | TYPE | RIM ELEV. | INV. IN | INV. OUT |
|---|---|---|---|---|
| 201 | B | 95.0 | --- | 91.50 |
| 202 | B | 95.9 | 91.25 | 91.15 |
| 203 | B | 97.0 | 90.70 | 90.45 |
| 204 | B | 95.9 | --- | 91.50 |
| 205 | B | 95.9 | 91.30 | 91.20 |
| 206 | B | 94.7 | --- | 90.50 |
| 207 | B | 95.7 | 91.00 (FROM 205)<br>89.80 (FROM 206) | 89.70 |
| 208 | B | 94.7 | --- | 90.50 |
| 209 | B | 95.7 | 89.40 (FROM 207)<br>89.80 (FROM 208) | 89.30 |
| 210 | B | 96.5 | 89.10 (FROM 203)<br>89.10 (FROM 209) | 88.85 |
| 211 | B | 96.5 | 88.10 | 88.00 |
| 212 | B | 94.0 | --- | 90.00 |
| 213 | B | 94.0 | 87.20 (FROM 211)<br>89.30 (FROM 212)<br>87.70 (FROM 214) | 87.10 |
| 214 | B | 93.5 | 88.80 | 88.70 |
| 215 | B | 93.5 | --- | 89.00 |

| REV. | BY | DATE | STATUS |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | 8/17/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP FOR SITE PLAN APPROVAL |
| | | 6/26/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP |

OCTOBER CORPORATION
INTERMODAL TRANSFER FACILITY
PRESUMPSCOT STREET
PORTLAND, MAINE

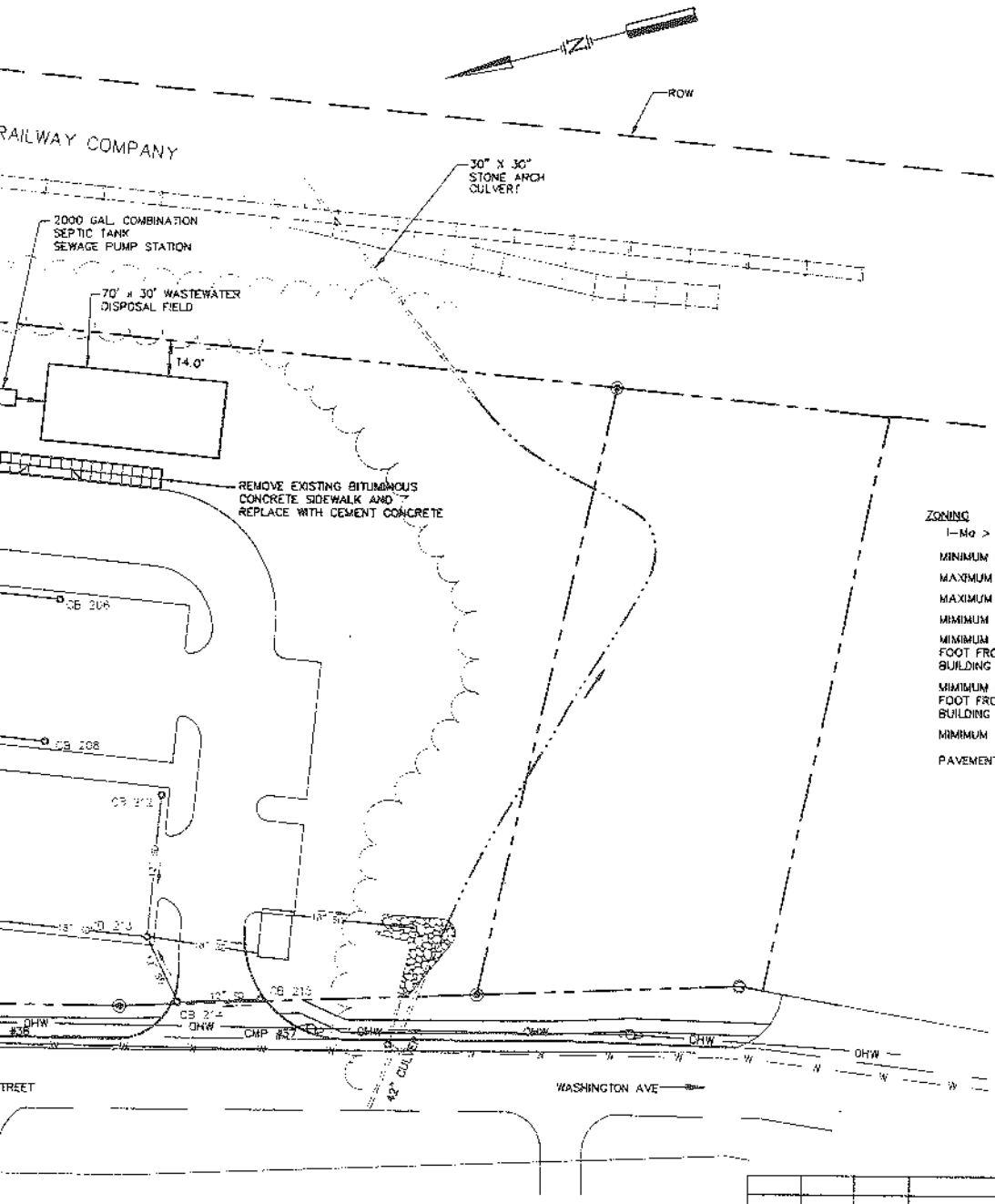
PHASE I
GEOMETRIC LAYOUT & UTILITY PLAN

SME
Sevee & Maher Engineers, Inc.
Consulting Engineers
Cumberland Center, Maine

| | |
|---|---|
| DESIGN BY: | JRK |
| DRAWN BY: | BISK |
| DATE: | 5/04/01 |
| LMN: | PH1-LAYOUT |
| PCP: | PH1-LAYOUT |

JOB NO. 00013.07 DWG FILE SITEPLAN

C-104




ZONING

I-Mo > MODERATE IMPACT INDUSTRIAL (OFF PENINSULA)

MINIMUM LOT SIZE: NONE

MAXIMUM IMPERVIOUS SURFACE RATIO: SEVENTY-FIVE (75) PERCENT

MAXIMUM BUILDING HEIGHT: FORTY-FIVE (45) FEET.

MIMIMUM SIDE YARDS: TWENTY-FIVE (25) FEET.

MIMIMUM REAR YARDS: EACH STRUCTURE SHALL BE SET BACK ONE (1) FOOT FROM THE REAR PROPERTY LINE FOR EACH ONE (1) FOOT OF BUILDING HEIGHT, UP TO TWENTY-FIVE (25) FEET.

MIMIMUM FRONT YARD: EACH STRUCTURE SHALL BE SET BACK ONE (1) FOOT FROM THE FRONT PROPERTY LINE FOR EACH ONE (1) FOOT OF BUILDING HEIGHT.

MIMIMUM STREET FRONTAGE: SIXTY (60) FEET.

PAVEMENT SETBACK FROM LOT BOUNDARIES: TEN (10) FEET.

15 0 30 60 FEET

| REV. | BY | DATE | STATUS |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | 8/17/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP FOR SITE PLAN APPROVAL |
| | | 6/26/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP |

STATE OF MAINE PETER ... REGISTERED PROFESSIONAL ENGINEER

# OCTOBER CORPORATION
# INTERMODAL TRANSFER FACILITY
# PRESUMPSCOT STREET
# PORTLAND, MAINE

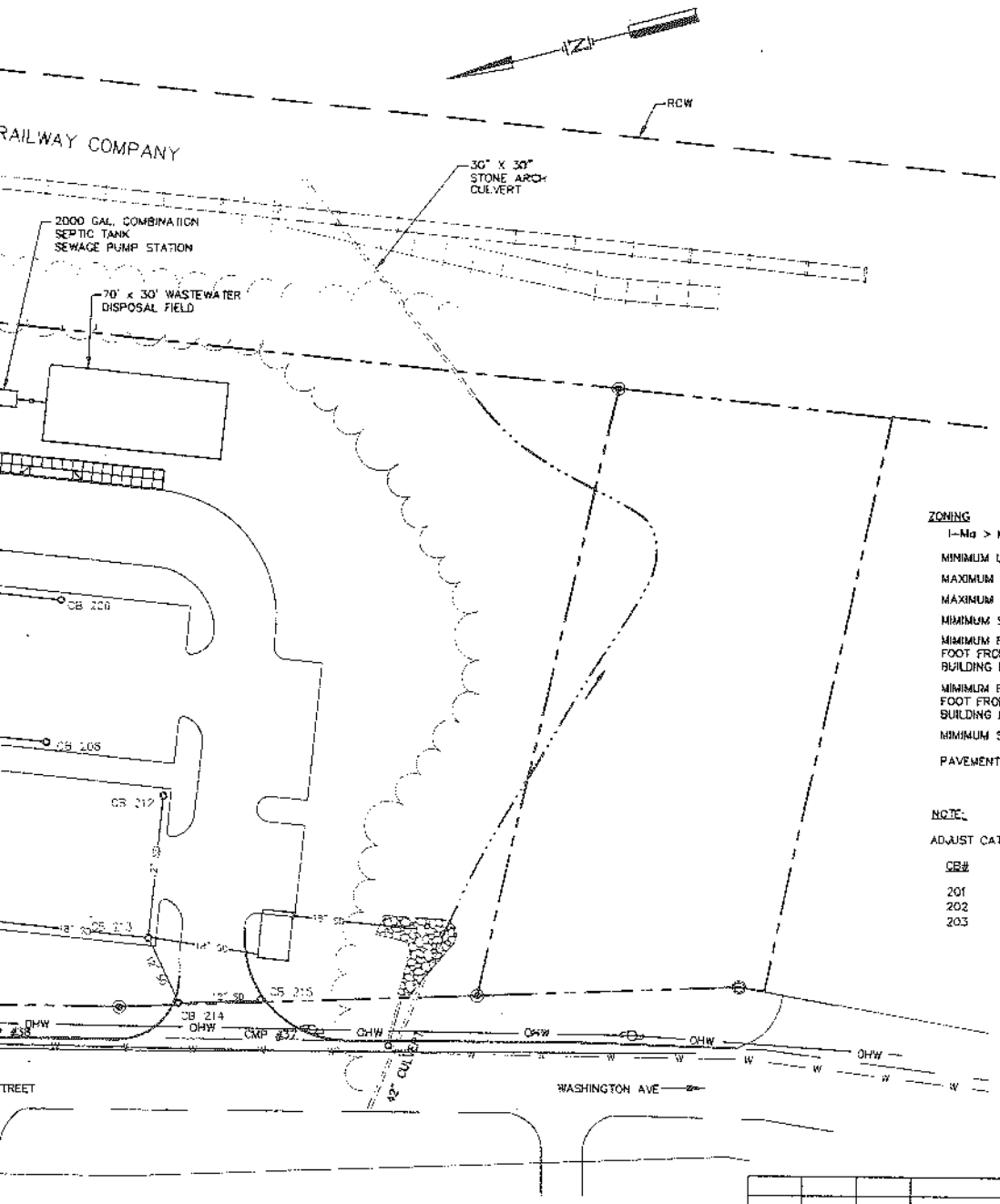
## PHASE II
## GEOMETRIC LAYOUT & UTILITY PLAN

SME
Sevee & Maher Engineers, Inc.
Consulting Engineers
Cumberland Center, Maine

| | |
|---|---|
| DESIGN BY: | JRK |
| DRAWN BY: | BISK |
| DATE: | 5/04/01 |
| LMN: | PH2-LAYOUT |
| PCP: | PH2-LAYOUT |

JOB NO. 00013.07 DWG FILE SITEPLAN

C-105




ZONING

I-Ma > MODERATE IMPACT INDUSTRIAL (OFF PENINSULA)

MINIMUM LOT SIZE: NONE

MAXIMUM IMPERVIOUS SURFACE RATIO: SEVENTY-FIVE (75) PERCENT

MAXIMUM BUILDING HEIGHT: FORTY-FIVE (45) FEET.

MINIMUM SIDE YARDS: TWENTY-FIVE (25) FEET.

MINIMUM REAR YARDS: EACH STRUCTURE SHALL BE SET BACK ONE (1) FOOT FROM THE REAR PROPERTY LINE FOR EACH ONE (1) FOOT OF BUILDING HEIGHT, UP TO TWENTY-FIVE (25) FEET.

MINIMUM FRONT YARD: EACH STRUCTURE SHALL BE SET BACK ONE (1) FOOT FROM THE FRONT PROPERTY LINE FOR EACH ONE (1) FOOT OF BUILDING HEIGHT.

MINIMUM STREET FRONTAGE: SIXTY (60) FEET.

PAVEMENT SETBACK FROM LOT BOUNDARIES: TEN (10) FEET.

NOTE:

ADJUST CATCH BASINS TO GRADE AS FOLLOWS:

| CB# | EXIST RIM EL | PROPOSED RIM EL |
|---|---|---|
| 201 | 95.0 | 96.0 |
| 202 | 95.0 | 96.9 |
| 203 | 97.0 | 97.9 |

15 0 30 60 FEET

| REV. | BY | DATE | STATUS |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | 8/17/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP FOR SITE PLAN APPROVAL |
| | | 6/26/01 | SUBMITTED TO PORTLAND PLANNING BOARD WORKSHOP |

STATE OF MAINE PETER [illegible] REGISTERED PROFESSIONAL ENGINEER

# OCTOBER CORPORATION
# INTERMODAL TRANSFER FACILITY
# PRESUMPSCOT STREET
# PORTLAND, MAINE

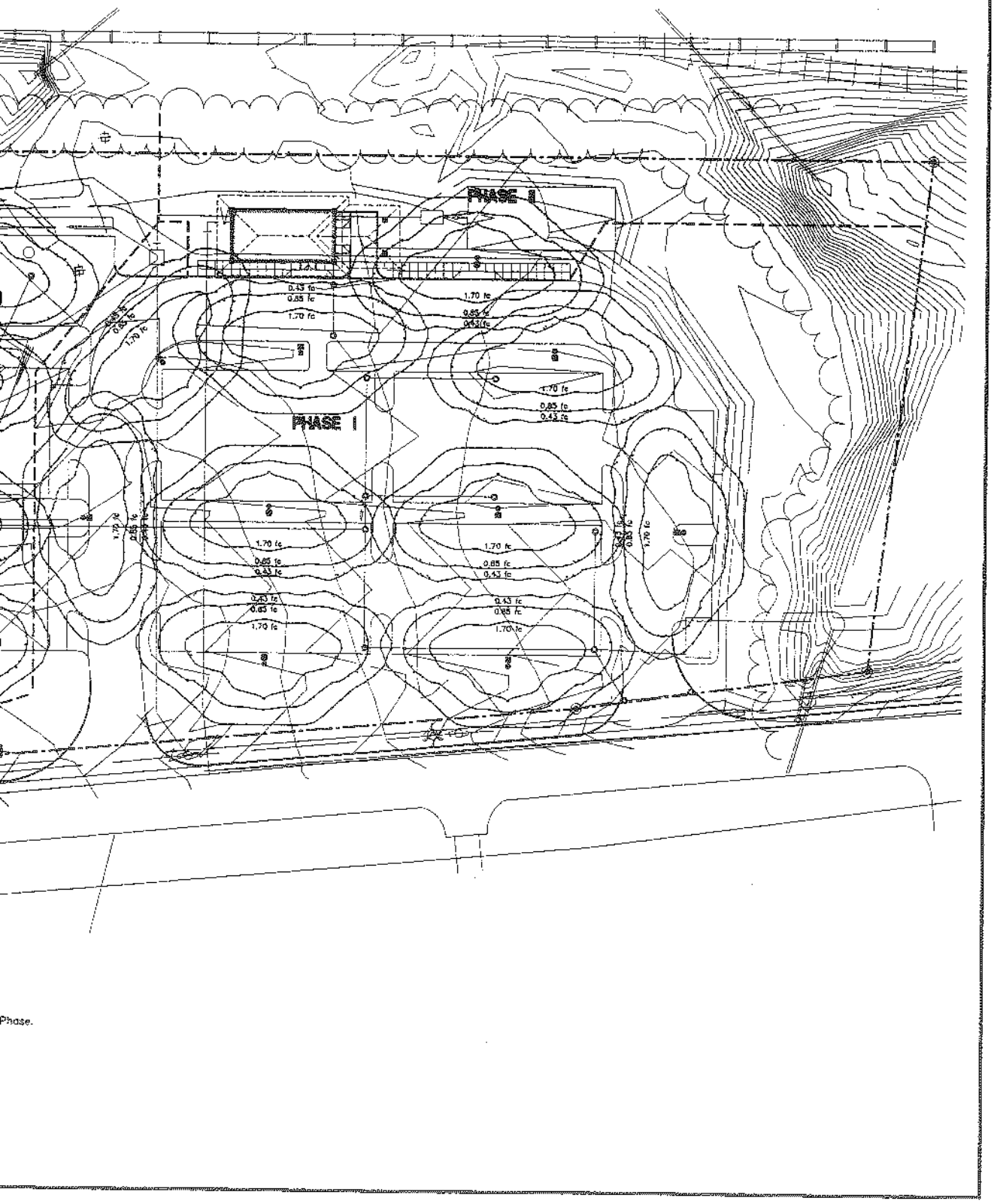
## PHASE III
## GEOMETRIC LAYOUT & UTILITY PLAN

SME
Sevee & Maher Engineers, Inc.
Consulting Engineers
Cumberland Center, Maine

| | |
|---|---|
| DESIGN BY: | JRK |
| DRAWN BY: | BSK |
| DATE: | 5/04/01 |
| LMN: | PH3-LAYOUT |
| PCP: | PH3-LAYOUT |

JOB NO. 00013.07 DWG FILE SITEPLAN

C-106




Phase.

Curtis Walter Stewart Architects

434 Cumberland Avenue
Portland, ME 04101
Phone: (207)774-4441
Fax: (207)774-4016

PO Box 8555
Laconia, NH 03247
Phone: (603)524-3000
Fax: (603)527-0160

OCTOBER CORPORATION
PORTLAND, MAINE

# INTERMODAL TRANSFER FACILITY

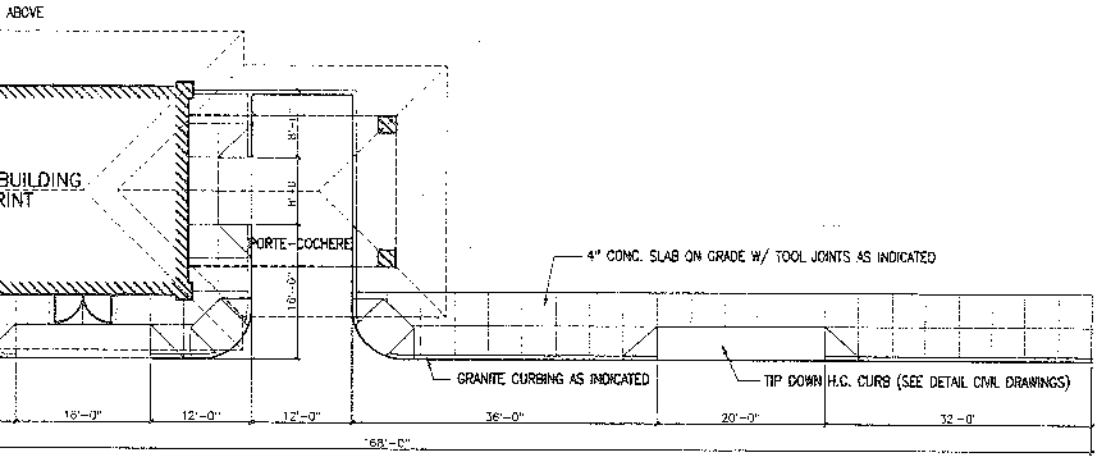
Presumpscot Street
Portland, ME

Project No: 01414 ITF

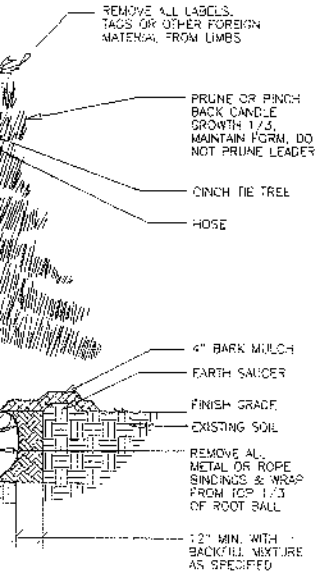
Drawing Title:
LIGHTING PLAN

Scale: 1" = 30'-0"
Date: August 16, 2001
Revision Dates:

Drawing Number:
E100

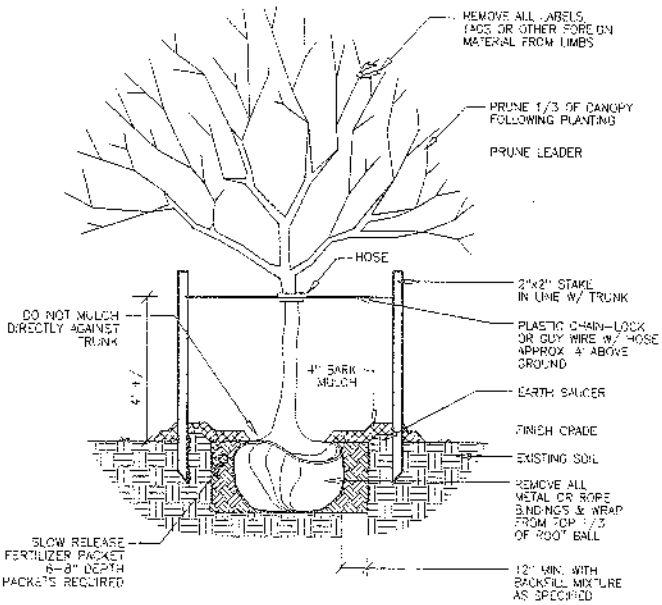



OF SIDEWALK




UNDER 2" CALIPER OR UNDER 8' IN HEIGHT

7'-0" IN HEIGHT & UNDER




DECIDUOUS TREES 2" TO 4" CALIPER

NOT TO SCALE


CWS
Curtis Walker Stewart Architects

434 Cumberland Avenue
Portland, ME 04101
Phone: (207)774-4441
Fax: (207)774-4016

PO Box 6555
Laconia, NH 03247
Phone: (603)524-3000
Fax: (603)527-0700


OCTOBER CORPORATION

PORTLAND, MAINE

# INTERMODAL TRANSFER FACILITY

Presumpscot Street
Portland, ME

Project No: 01434 ITF

Drawing Title:

SITE DETAILS

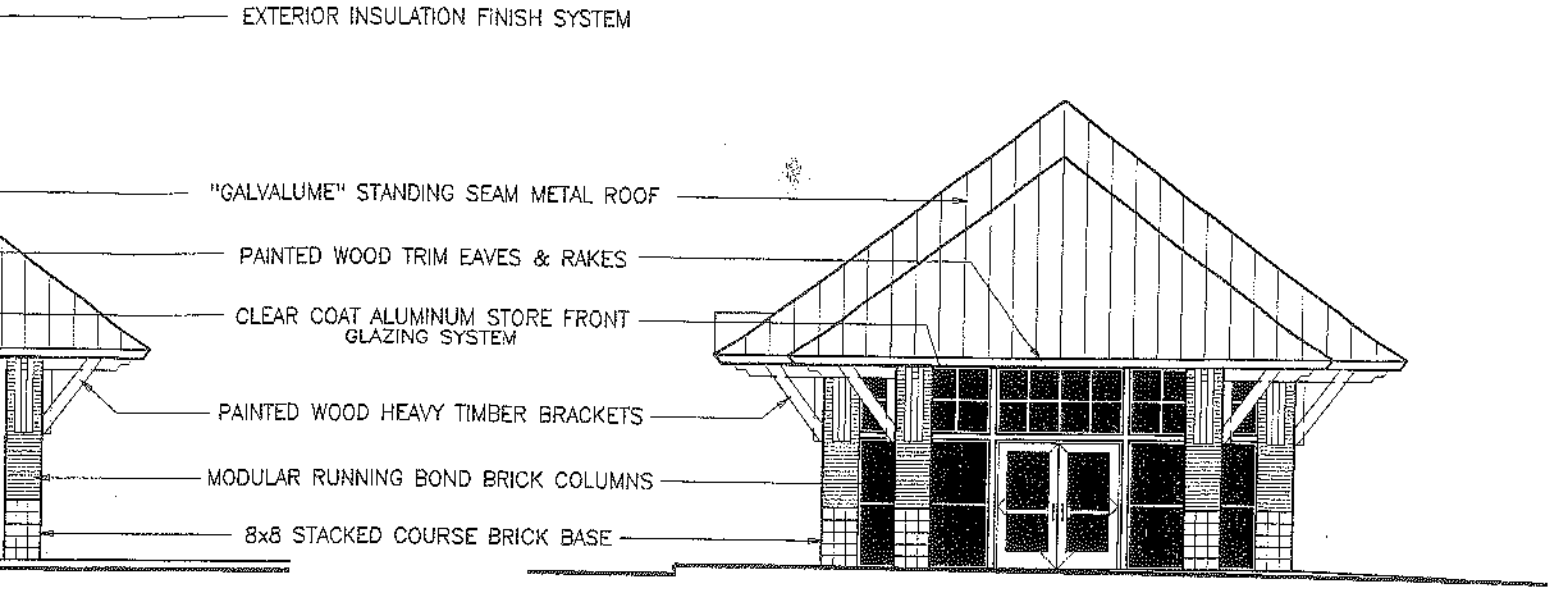
Scale: AS NOTED

Date: August 16, 2001

Revision Dates:

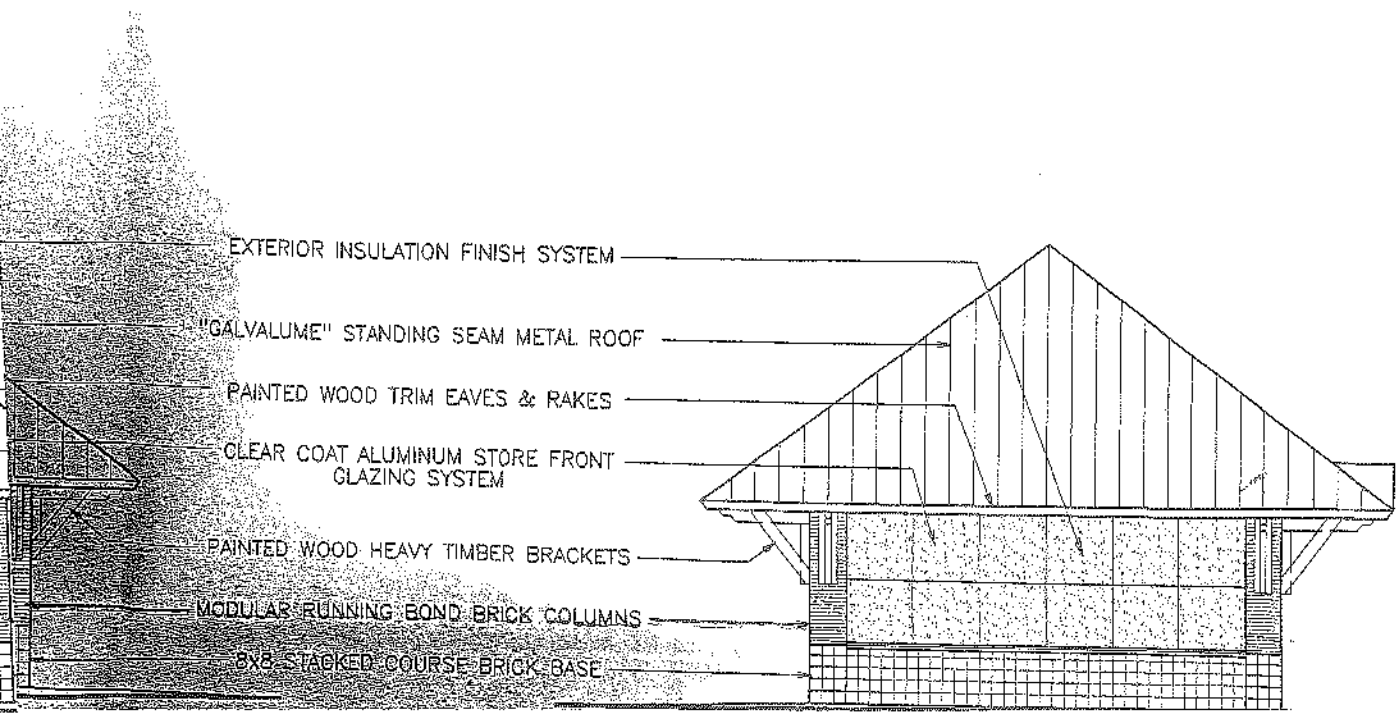
Drawing Number:

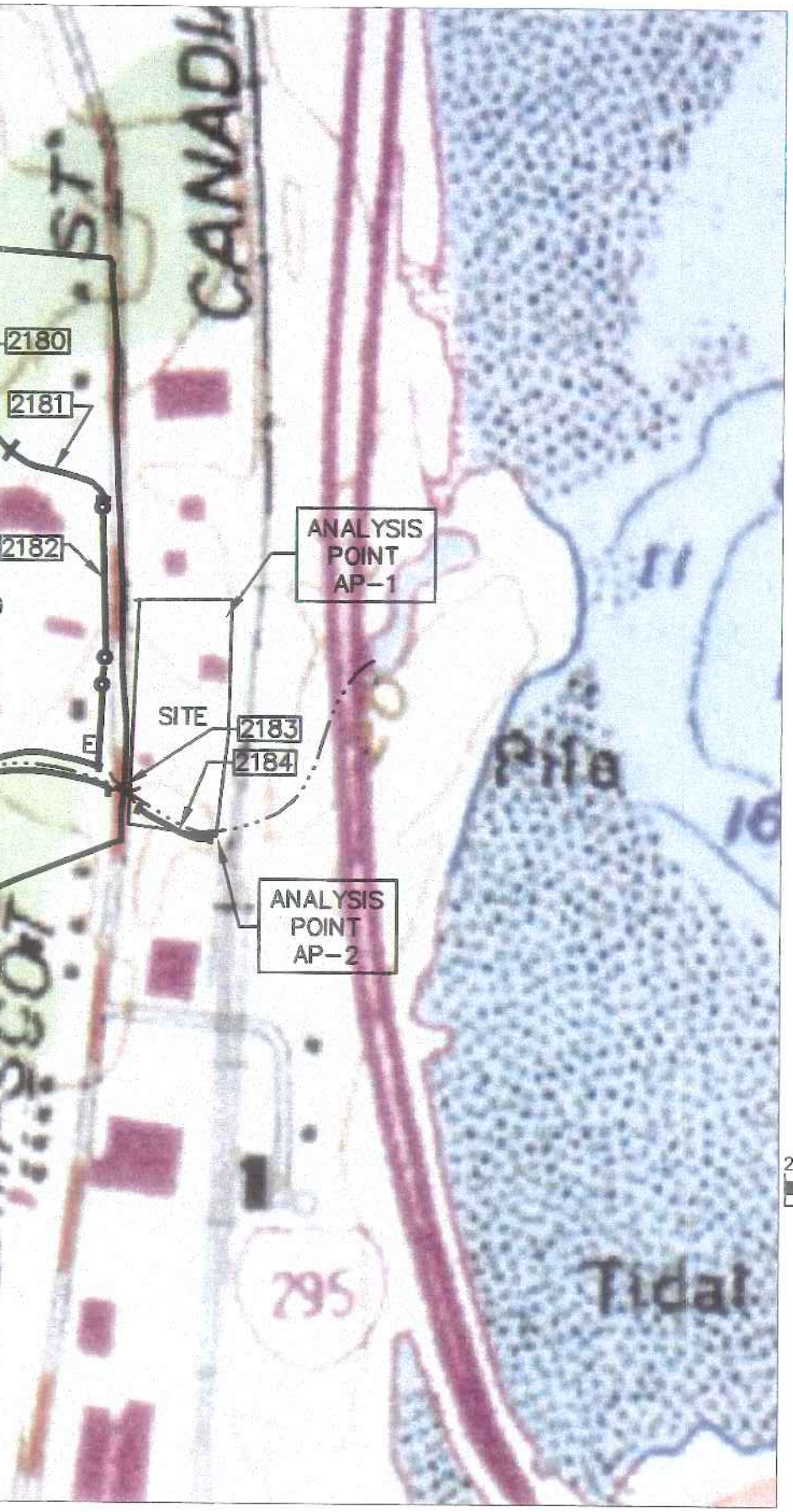
L101




## S SOUTH ELEVATION

SCALE: 1/8"=1'-0"






LEGEND:

SUBCATCHMENT BOUNDARY

SC-217 SUBCATCHMENT DESIGNATION

217 REACH DESIGNATION

tc(217) TIME OF CONCENTRATION DESIGNATION

REFERENCE:

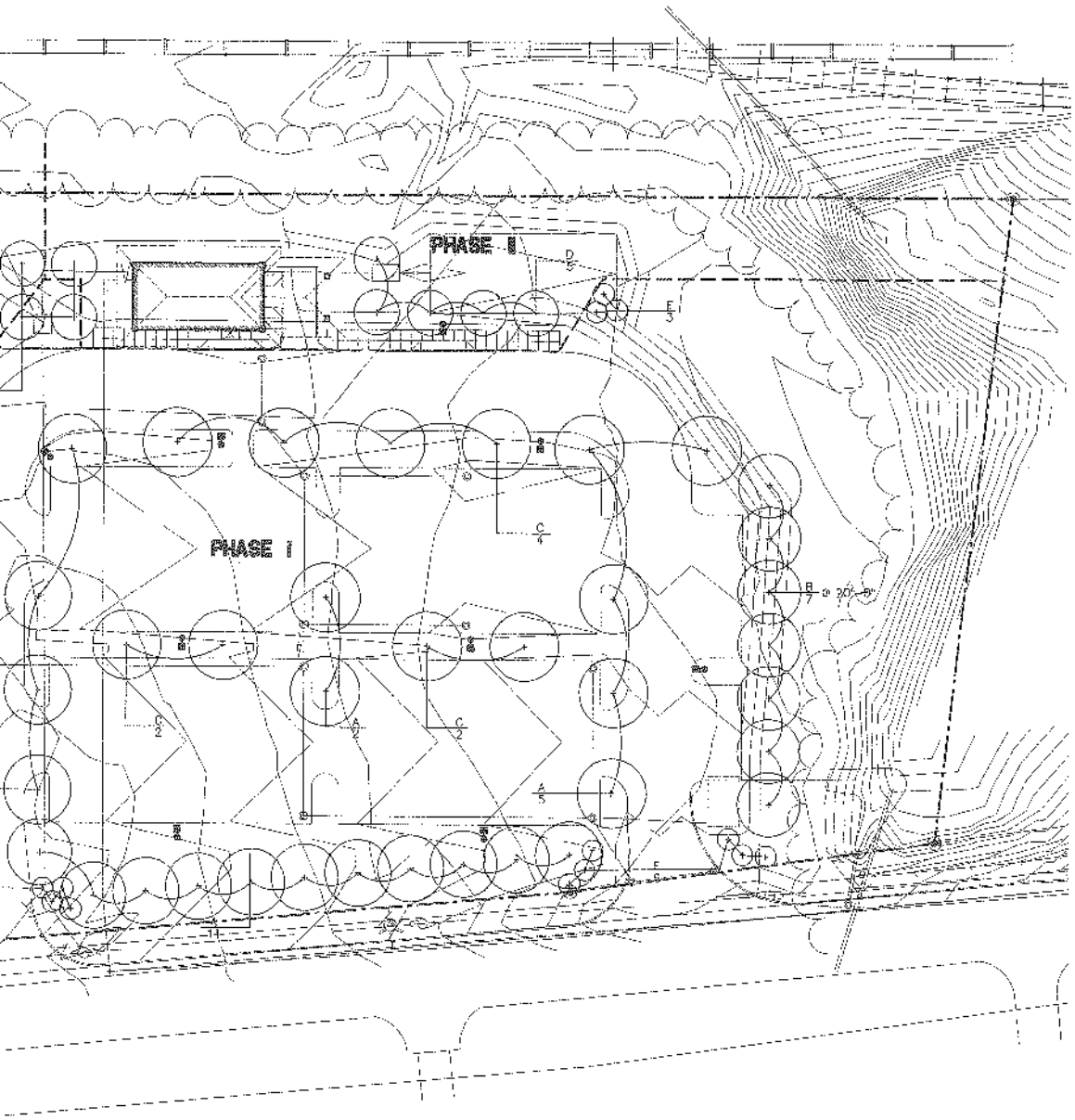
USGS 7.5 MINUTE TOPGRAPHIC MAP PORTLAND WEST DATED 1956, PHOTOREVISED 1978.

200 0 400 800 FEET

FIGURE 2
OCTOBER CORPORATION
INTERMODAL TRANSFER FACILITY
PRESUMPSCOT STREET
PORTLAND, MAINE
UPGRADIENT WATERSHED

SME

Sevee & Maher Engineers, Inc.




Curtis Walter Stevens
Architects

434 Cumberland Avenue
Portland, ME 04101
Phone: (207)774-4448
Fax: (207)774-4016

PO Box 6656
Lacomia, NH 03247
Phone: (603)524-5000
Fax: (603)527-0700

OCTOBER CORPORATION

PORTLAND, MAINE

# INTERMODAL TRANSFER FACILITY

Presumpscot Street
Portland, ME

Project No: 01414.07

Drawing Title:
LANDSCAPE PLAN

Scale: 1" = 30'-0"
Date: August 16, 2001
Revision Dates:

Drawing Number:
L100