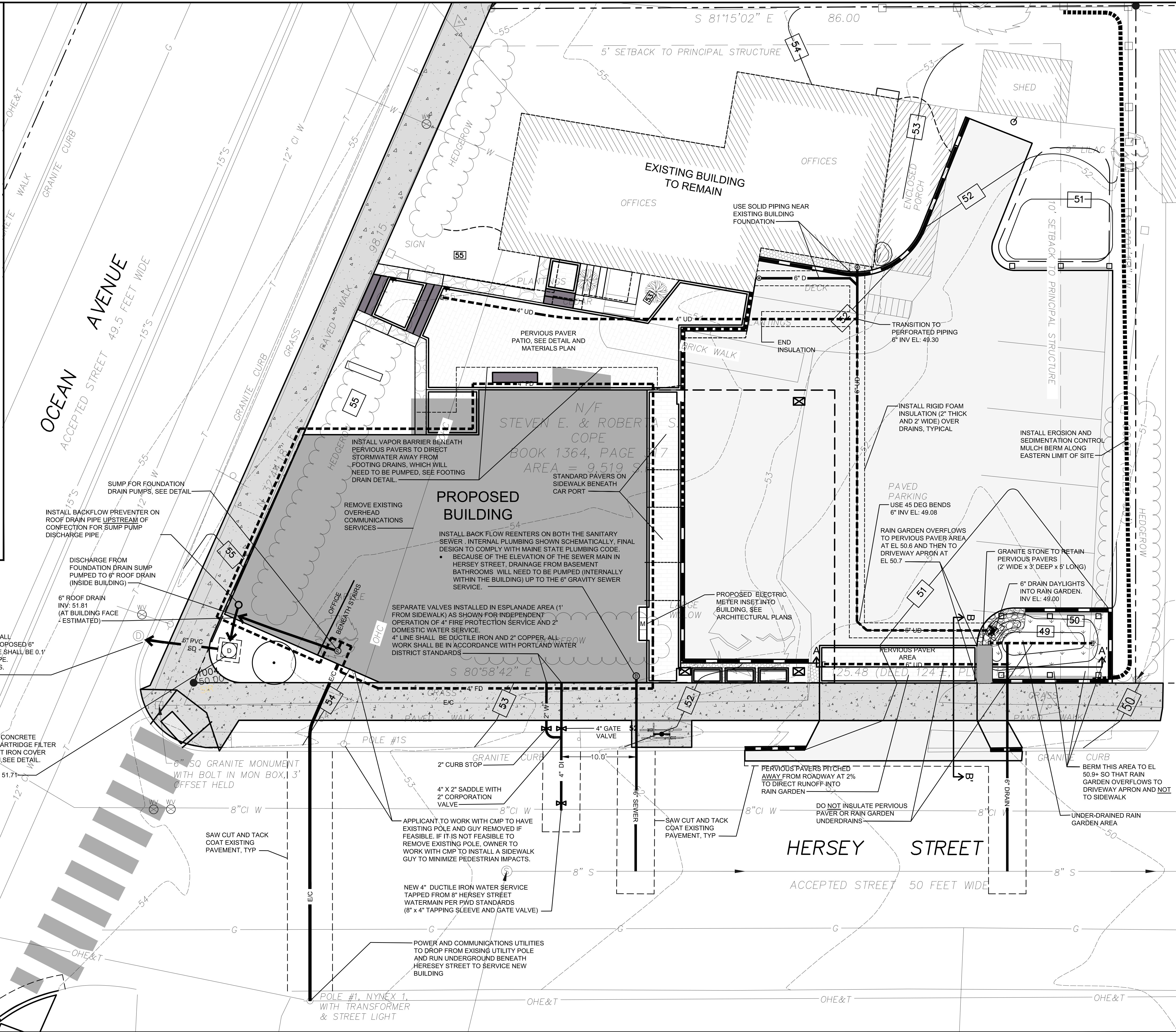


- NOTES**
- THE CITY OF PORTLAND REQUIRES A PRE-CONSTRUCTION MEETING BEFORE SITE WORK CAN BEGIN.
  - DRAIN PIPING SHOWN WITH SOLID LINES IS NON-PERFORATED PVC SDR 35. DRAIN PIPE SHOWN WITH DASHED LINES IS PERFORATED UNDERDRAIN (PERFORATED PVC SDR 35 - OR - PERFORATED, CORRUGATED HDPE WITH SMOOTH INTERIOR).
  - INSTALL EROSION AND SEDIMENTATION CONTROL IN COMPLIANCE WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BEST MANAGEMENT PRACTICES AND GOOD HOUSEKEEPING PRACTICES IN ACCORDANCE WITH APPENDICES A, B AND C OF MAINE DEP CHAPTER 500. CONTRACTOR SHALL UTILIZE VARYING BMPs TO MINIMIZE THE MIGRATION OF EXPOSED SOILS FROM THE SITE. THESE INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
    - GRADE SITE TO DRAIN INTERNALLY
    - INSTALL LOCALIZED SEGMENTS OF MULCH BERM, SILT SOCK, HAY BALES AND/OR CRUSHED STONE CHECK DAMS TO FILTER RUNOFF BEFORE IT LEAVES THE SITE.
    - INSTALL SILT SACKS (OR APPROVED EQUAL) IN DOWNGRADE CATCH BASINS.
    - INSTALL TEMPORARY CONSTRUCTION ENTRANCE (SEE DETAIL) TO MINIMIZE TRACKING OF SOILS ONTO HERSEY STREET.
    - SWEEP HERSEY STREET FREQUENTLY. WATER AND/OR VACUUMING SHALL BE USED TO CONTROL DUST WHEN SWEEPING.
  - CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENTATION CONTROL MEASURES ON A WEEKLY BASIS AND AFTER RAINSTORM EVENTS AND SHALL KEEP A LOG OF THESE INSPECTIONS. ANY ISSUES IDENTIFIED SHALL BE ADDRESSED AS SOON AS POSSIBLE AND BEFORE ADDITIONAL PRECIPITATION.
  - ALL WORK IN THE RIGHT OF WAY SHALL MEET THE CITY OF PORTLAND TECHNICAL MANUAL STANDARDS
  - ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM.
  - CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES IN THE FIELD AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
  - UTILITY LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION. ANY DISCREPANCIES OR CONFLICTS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER.
  - ALL UTILITY INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTLAND, AS WELL AS ANY OTHER LOCAL, STATE, FEDERAL AND UTILITY OWNER REQUIREMENTS.
  - SITE CONTRACTOR SHALL REPAIR ALL DISTURBED AREAS IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND DETAILS.
  - ALL AREAS DISTURBED BY CONSTRUCTION NOT TO BE PAVED OR OTHERWISE TREATED SHALL BE LOAMED AND SEEDED ACCORDING TO THE PROJECT SPECIFICATIONS.



**23 Ocean Avenue**

23 OCEAN AVENUE, PORTLAND, MAINE

Owner / Developer:  
 Steven & Roberta Cope  
 172 Concord Street  
 Portland, Maine 04103

Consultants:

**km**  
 a

Architect  
 Kevin Moquin, Architect  
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 Portland, Maine 04104  
 207.615-6421

**C**  
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**RANSOM**  
 Consulting, Inc.

Civil Engineer  
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 207-772-2891

0 3 6 12  
 SCALE IN FEET  
 1" = 6'

STATE OF MAINE  
 John L. Mahoney  
 #12340  
 LICENSED PROFESSIONAL ENGINEER

**UTILITY & STORMWATER MANAGEMENT PLAN**

| No. | Revision/Issue           | Date     |
|-----|--------------------------|----------|
| D   | FOR PERMIT               | 1-9-17   |
| C   | FOR PERMIT               | 12-14-16 |
| B   | REVISED PER CITY COMMENT | 9-7-16   |
| A   | SITE PLAN PERMITTING     | 6-6-16   |

| Design by: | Checked by: |
|------------|-------------|
| JIM        | SJB         |

| Drawn by: | Approved by: |
|-----------|--------------|
| JIM       | SJB          |

Project:  
161.06035

Sheet No:  
**C1**

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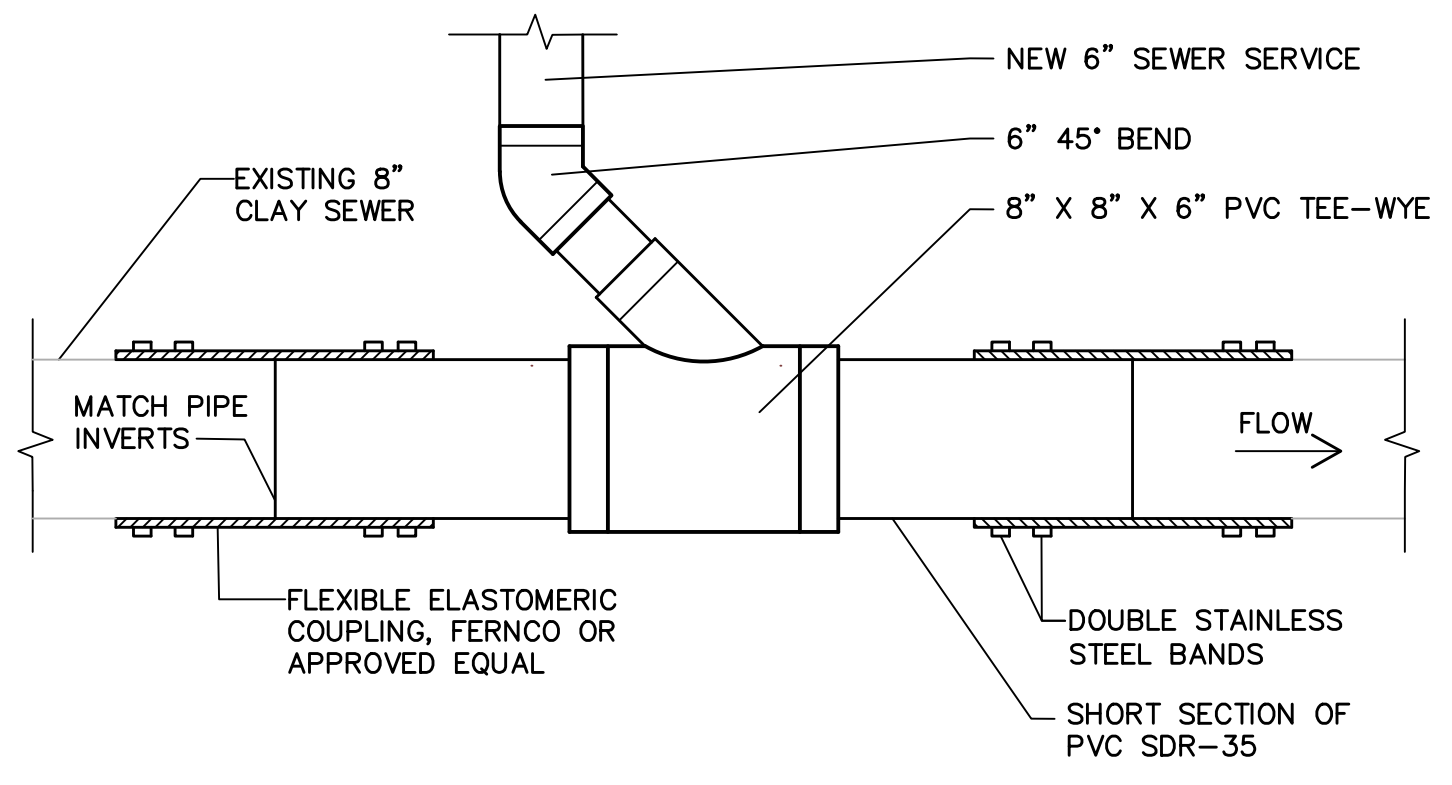
Consulting, Inc.

Civil Engineer  
Ransom Consulting, Inc.  
400 Commercial Street, Suite 404  
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CIVIL DETAILS

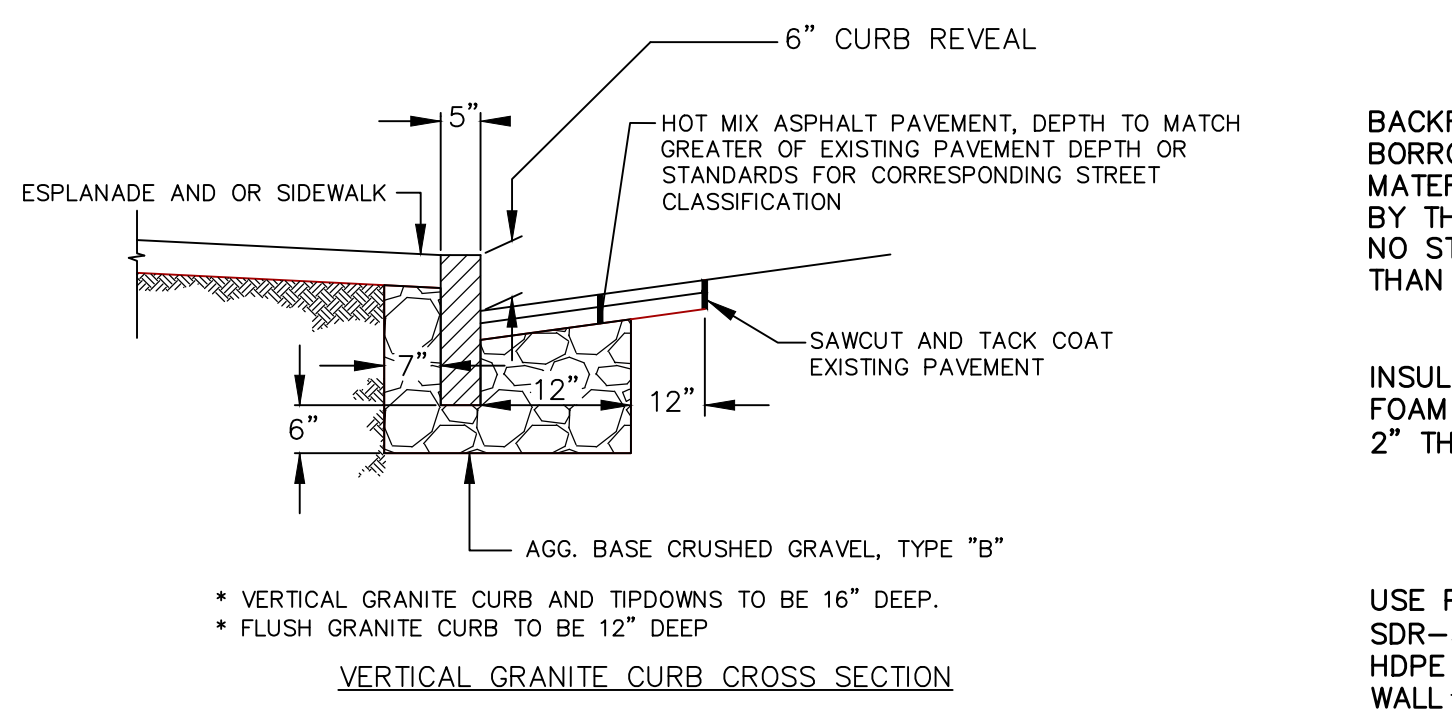
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| C          | FOR PERMIT               | 12-14-16         |
| B          | REVISED PER CITY COMMENT | 9-7-16           |
| A          | SITE PLAN PERMITTING     | 6-6-16           |
| No.        | Revision/Issue           | Date             |
| Design by: | JIM                      | Checked by: SJB  |
| Drawn by:  | JIM                      | Approved by: SJB |
| Project:   | 161.06035                |                  |
| Sheet No:  | C2                       |                  |



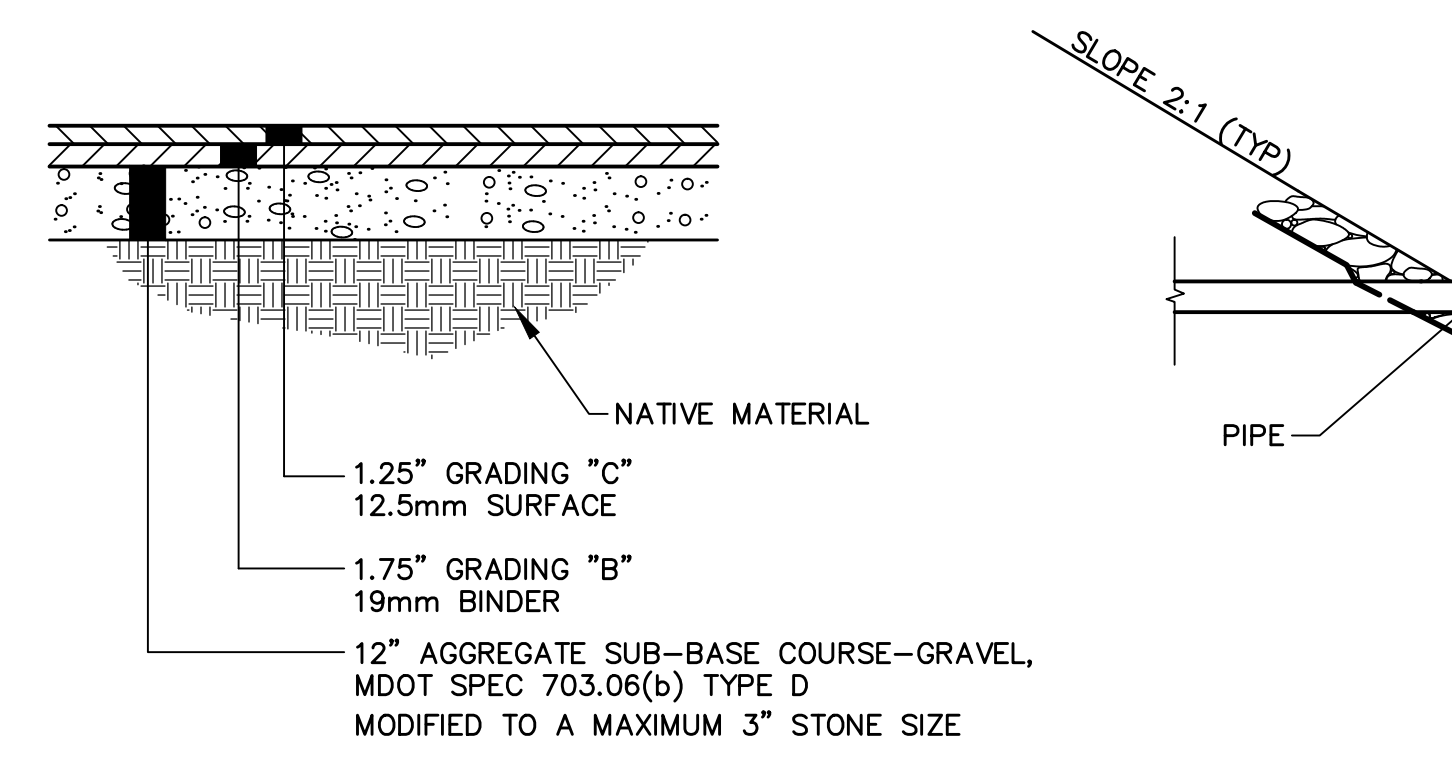
- If the existing sewer is PVC then the connection shall be made using bell and spigot joints, NOT Ferncos.
- All damaged piping shall be removed by saw cutting or removing an entire segment of pipe and replaced with new PVC. Contractor shall remove clay bell(s) (by saw cutting) to facilitate Fernco installation. Saw cuts shall be square so that joints between new and existing pipes do not have gaps, particular attention shall be paid to maintaining a smooth invert.
- Contractor is responsible for maintaining sewer flows while while making the new sewer service and drain connections. If required, bypass pumping shall be coordinated with the City. Contractor shall provide the City 24 hours notice.
- Bypass pumping may be required and shall be coordinated with the City

\* CONTRACTOR MAY USE AN INSERTA TEE OR "APPROVED EQUAL" TO MAKE THE SEWER CONNECTIONS AS APPROVED BY THE CITY OF PORTLAND

**CONNECTION TO SANITARY SEWER**  
NOT TO SCALE



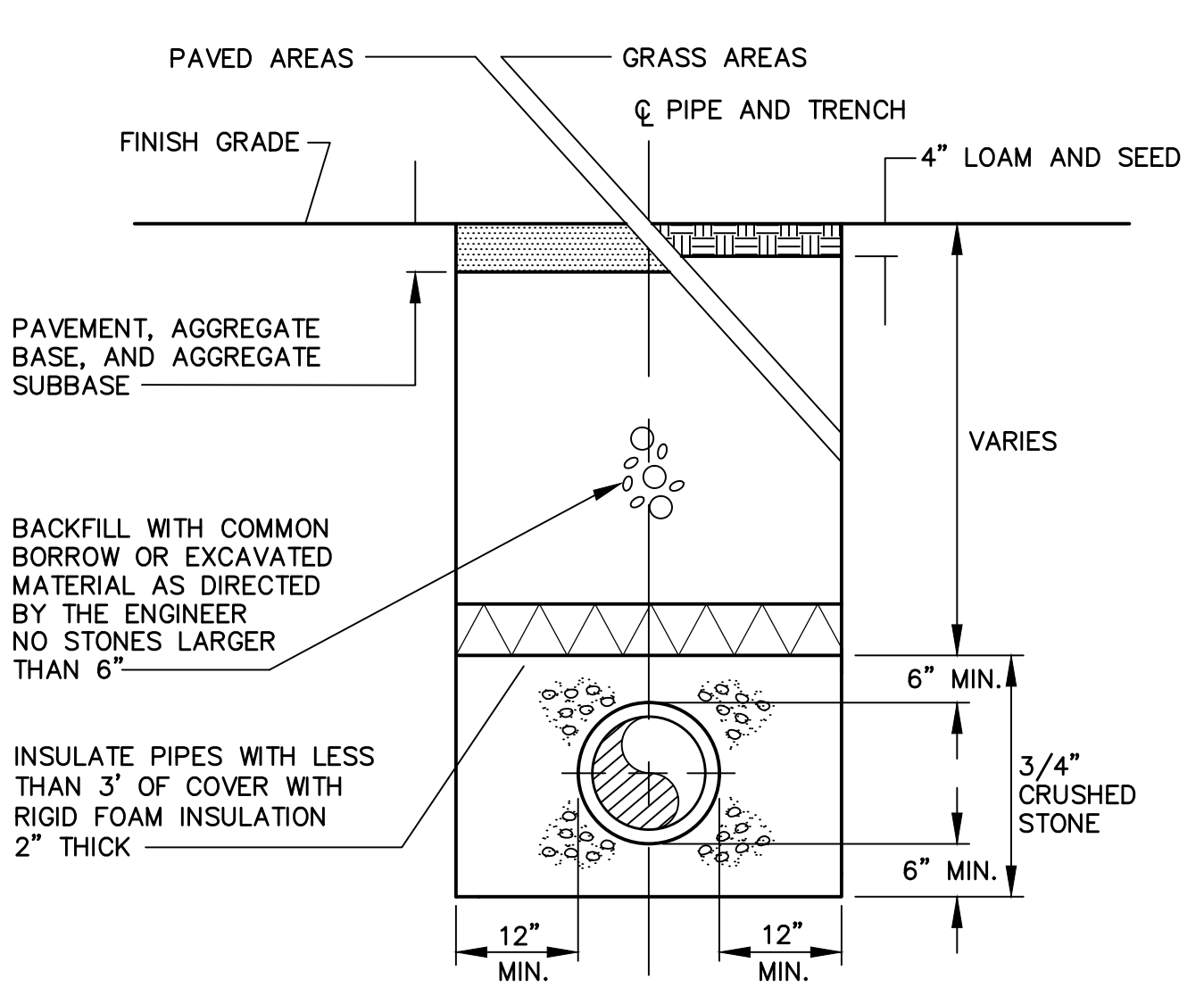
**VERTICAL GRANITE CURB**  
**(INSTALLATION IN CITY RIGHT OF WAY & WITHIN SITE)**  
NOT TO SCALE



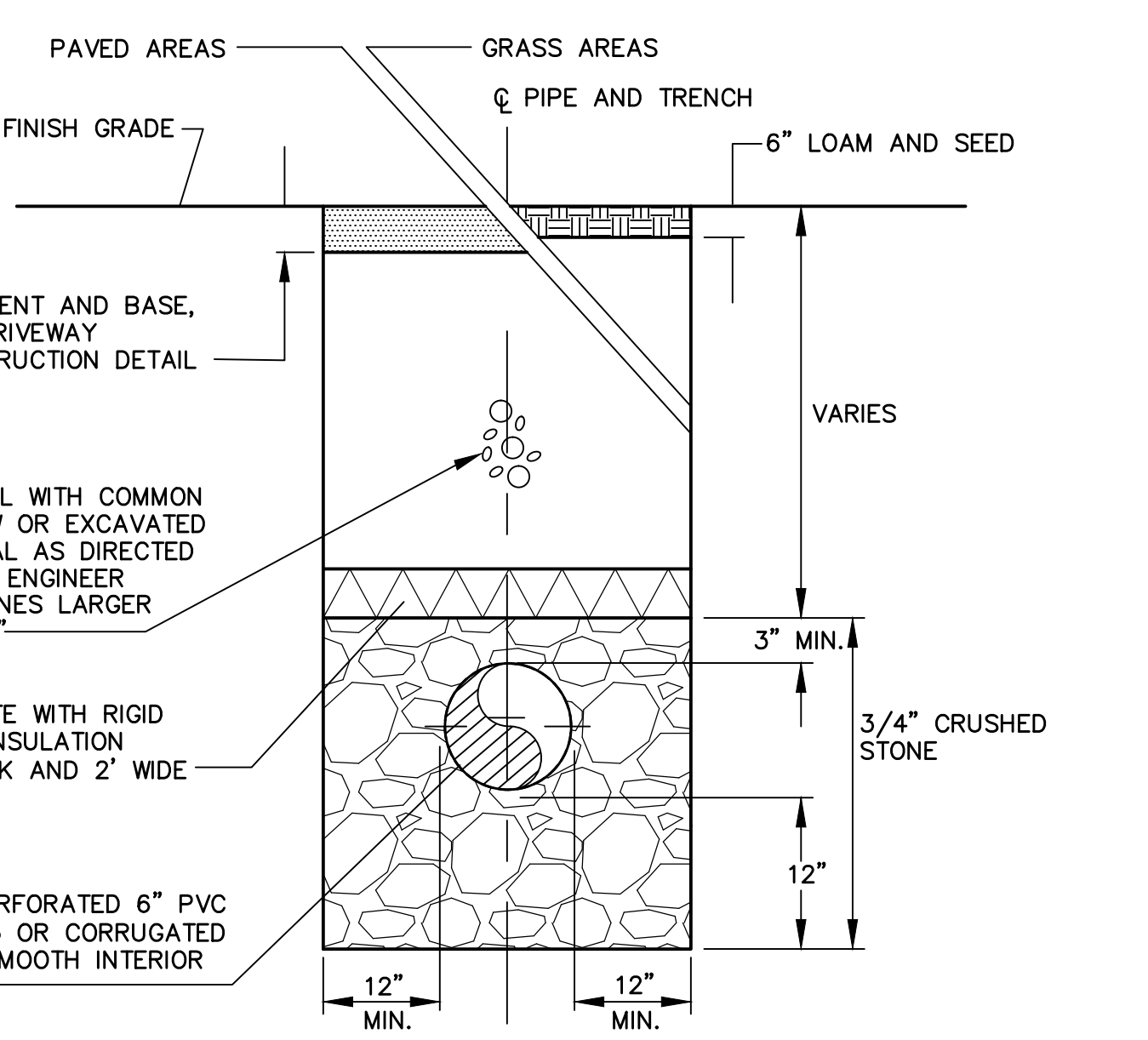
**TYPICAL DRIVEWAY CONSTRUCTION**  
**OUTSIDE OF RIGHT OF WAY**  
NOT TO SCALE

\* SEE PLANS FOR SHAPE/SIZE OF ENERGY DISSIPATORS  
\*\* RIP RAP SHALL CONSIST OF ROUND NATURAL STONE SUCH AS RIVER ROCK

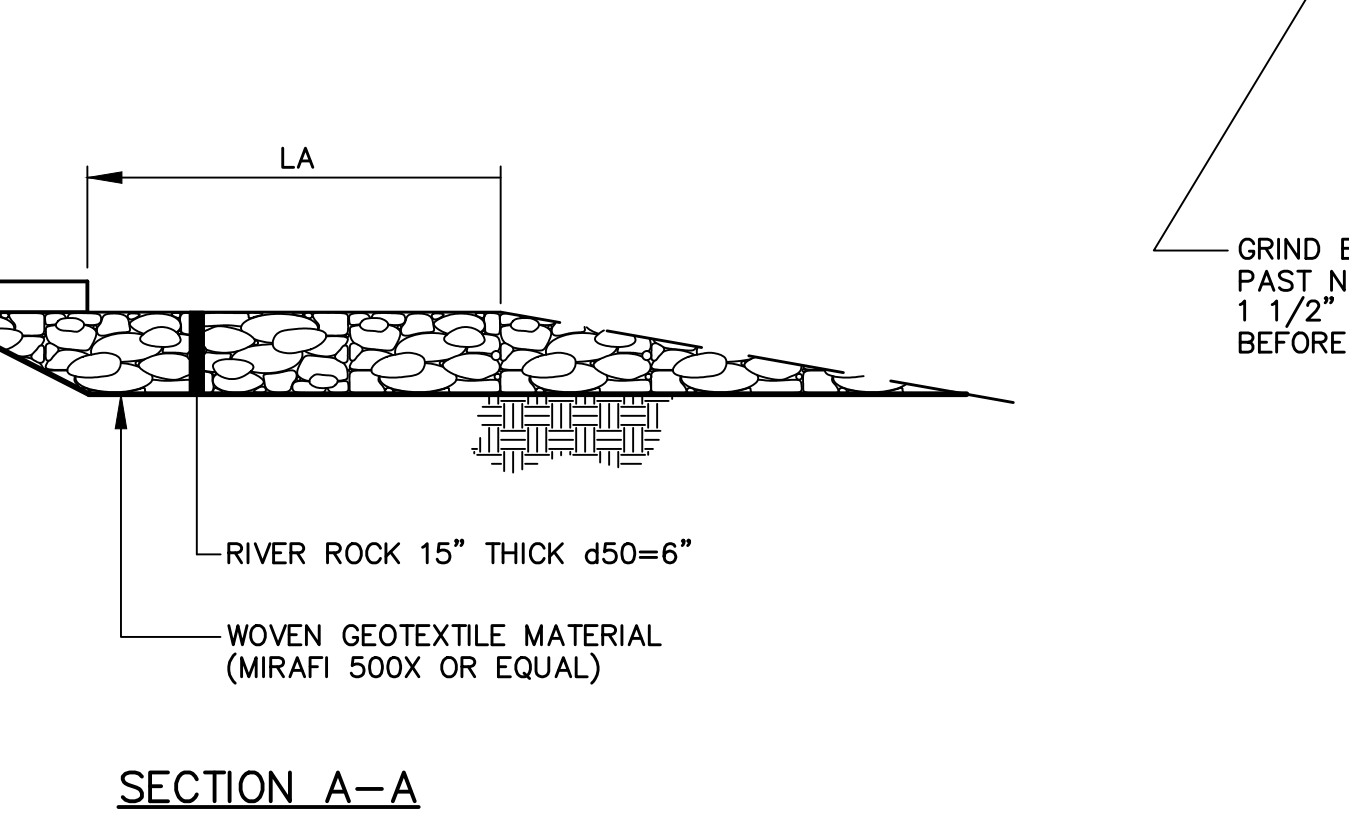
**ENERGY DISSIPATER (RIVER ROCK) DETAIL**  
NOT TO SCALE



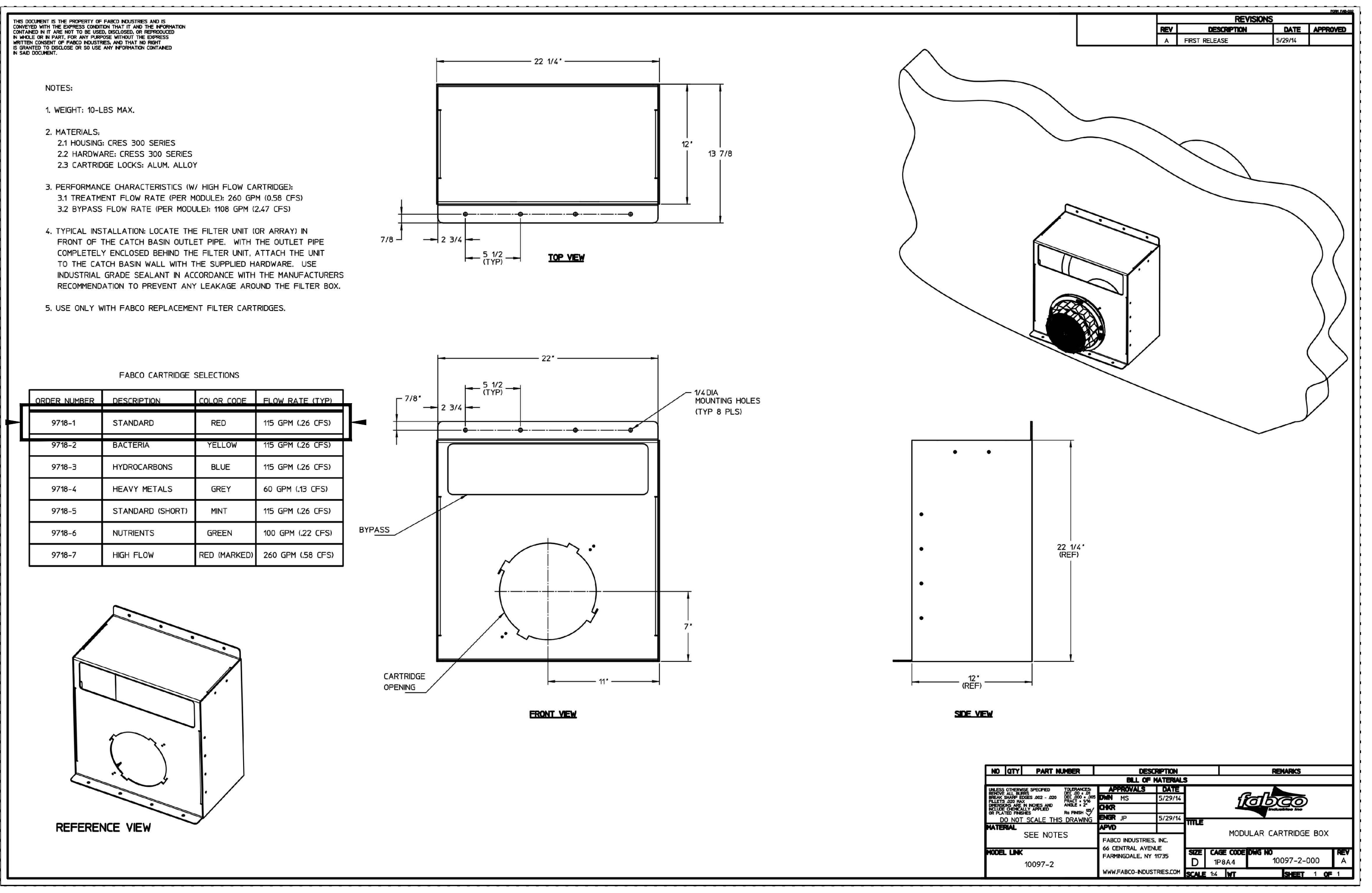
**TYPICAL TRENCH REPAIR DETAIL**  
NOT TO SCALE



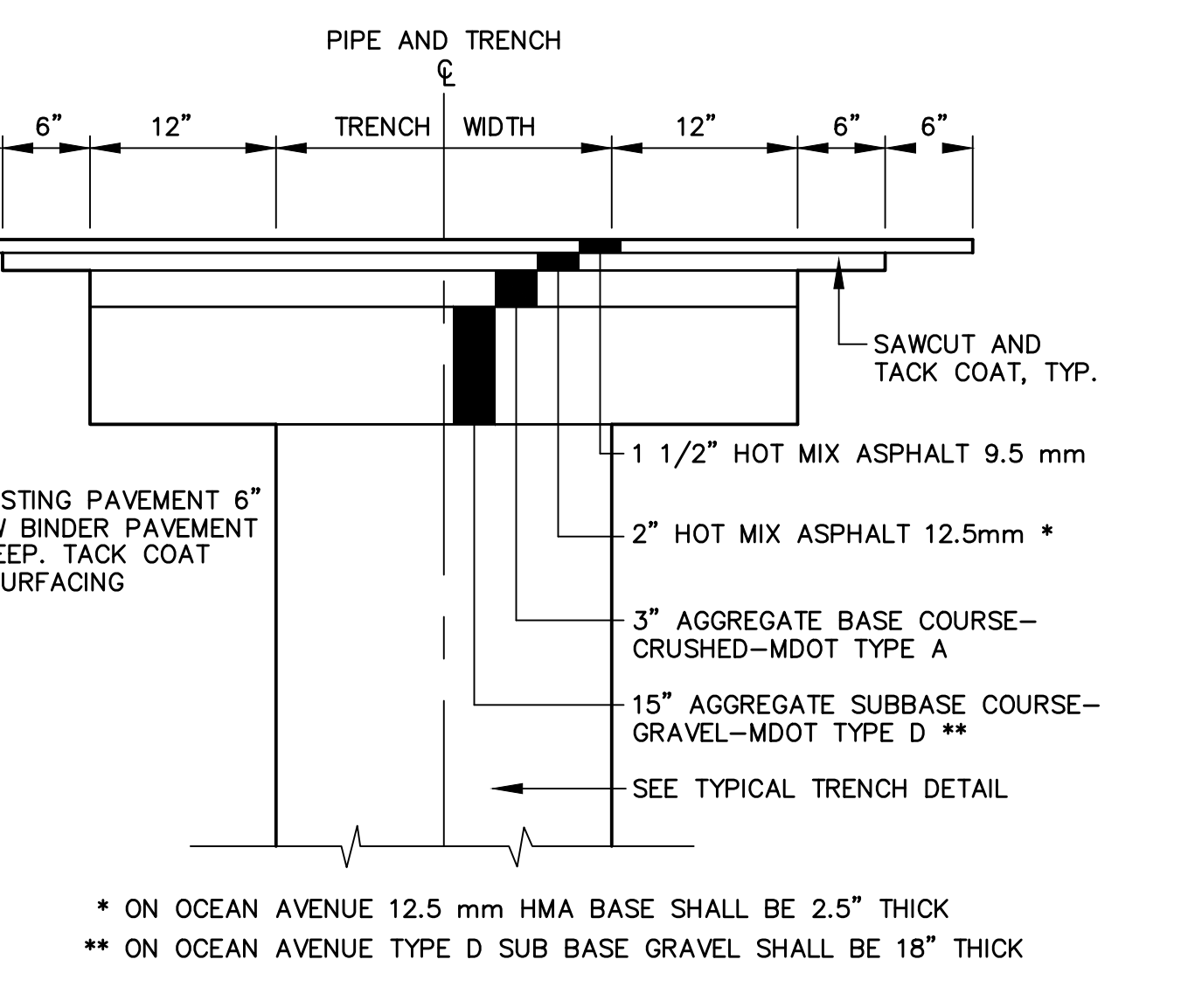
**UNDERDRAIN DETAIL FOR ROOF DRAIN COLLECTION SYSTEM**  
NOT TO SCALE



| APRON SCHEDULE* |               |                    |                      |               |               |
|-----------------|---------------|--------------------|----------------------|---------------|---------------|
| PIPE            | RIPRAP**      |                    |                      | RIPRAP**      |               |
|                 | d50 SIZE (FT) | THICKNESS t (INCH) | LENGTH LA (FT) (MIN) | WIDTH W1 (FT) | WIDTH W2 (FT) |
| 12" OR LESS     | 0.5'          | 15"                | 10'                  | 3.0'          | 12'           |

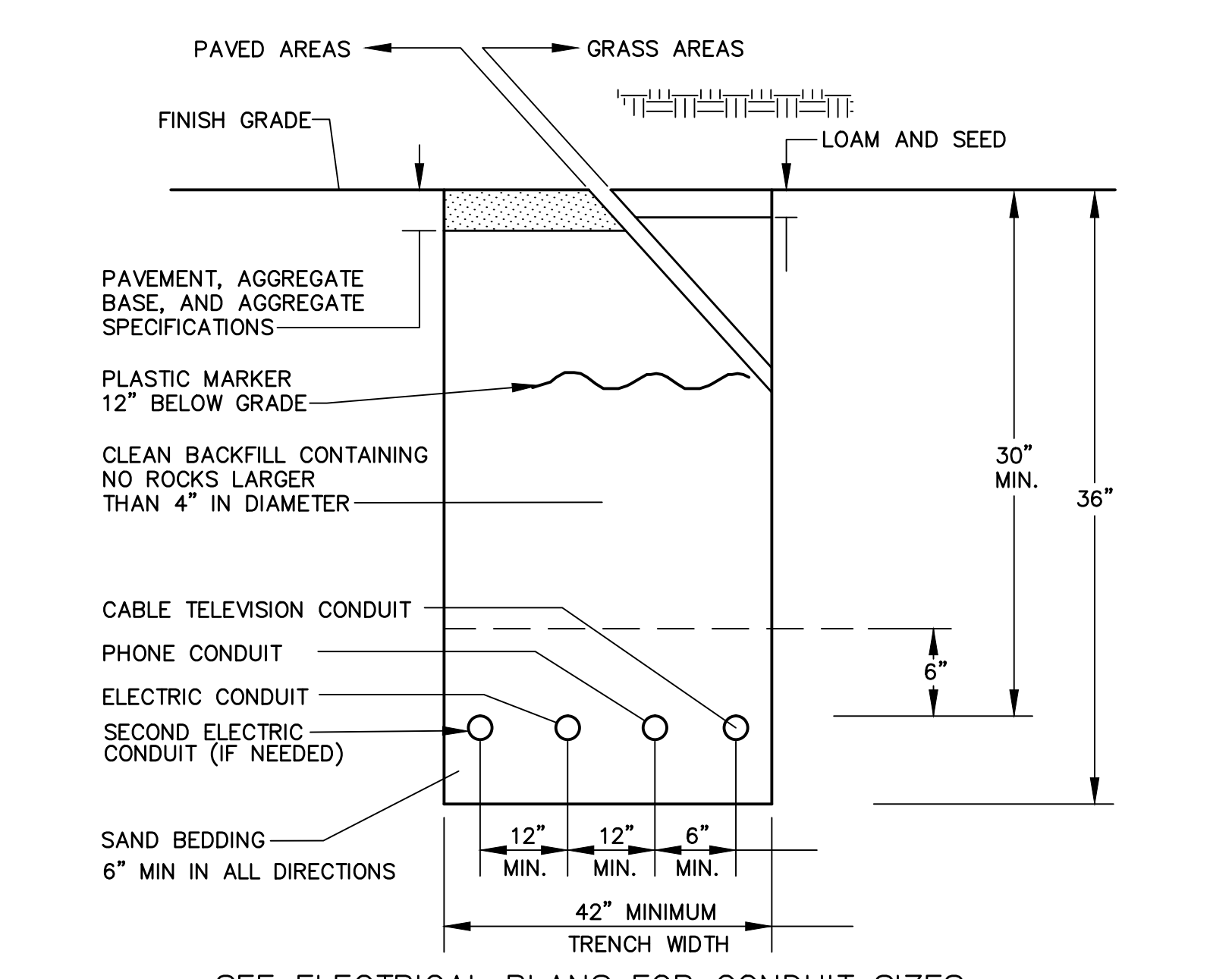


**STORWATER FILTER DETAIL**  
NOT TO SCALE



**TYPICAL TRENCH PAVING DETAIL**  
NOT TO SCALE

\* ON OCEAN AVENUE 12.5 mm HMA BASE SHALL BE 2.5" THICK  
\*\* ON OCEAN AVENUE TYPE D SUB BASE GRAVEL SHALL BE 18" THICK



**UNDERGROUND ELECTRIC/COMMUNICATIONS UTILITY TRENCH DETAIL**  
NOT TO SCALE

SEE ELECTRICAL PLANS FOR CONDUIT SIZES

Owner / Developer:  
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Consultants:



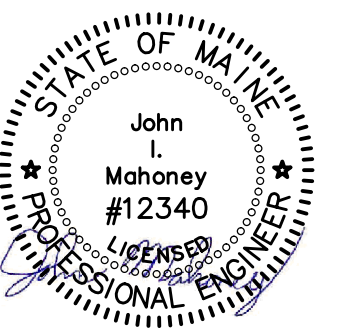
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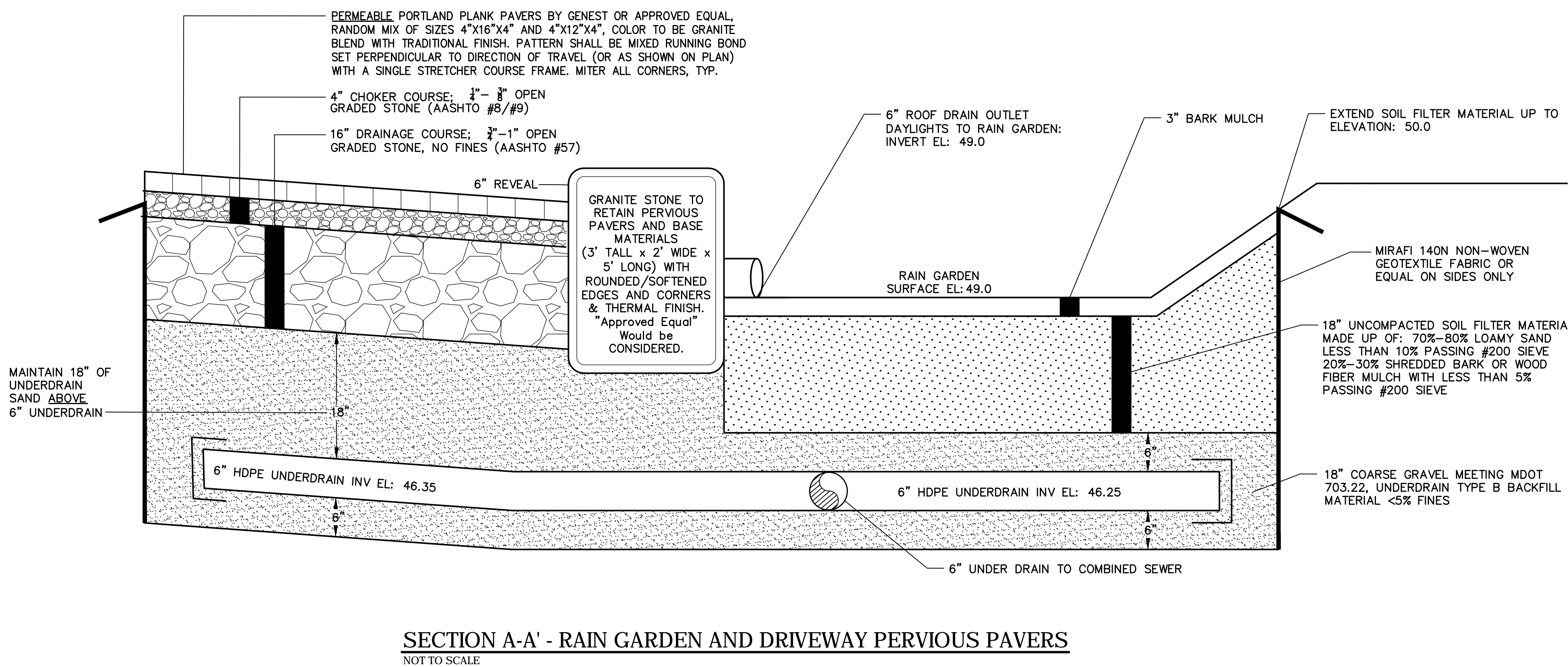
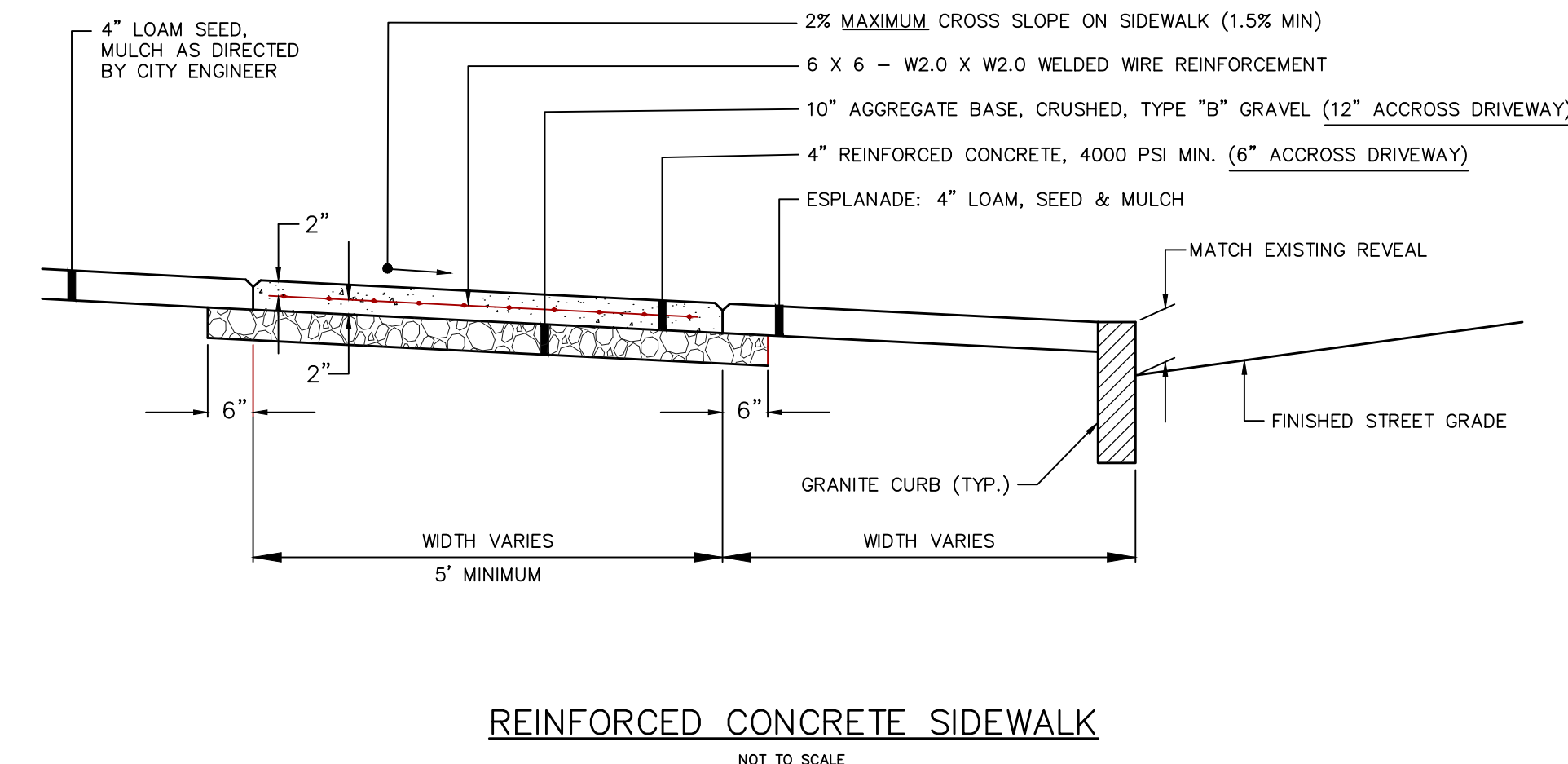
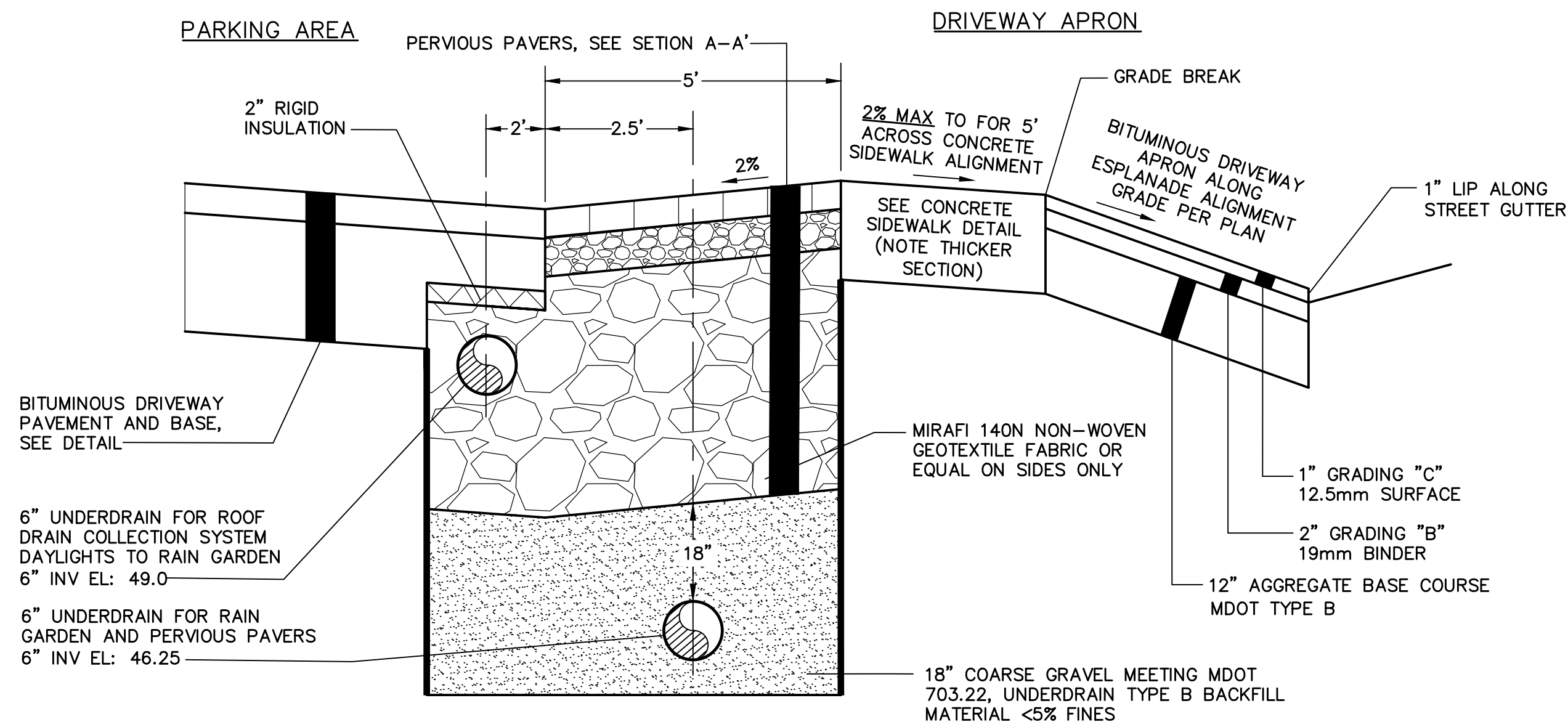
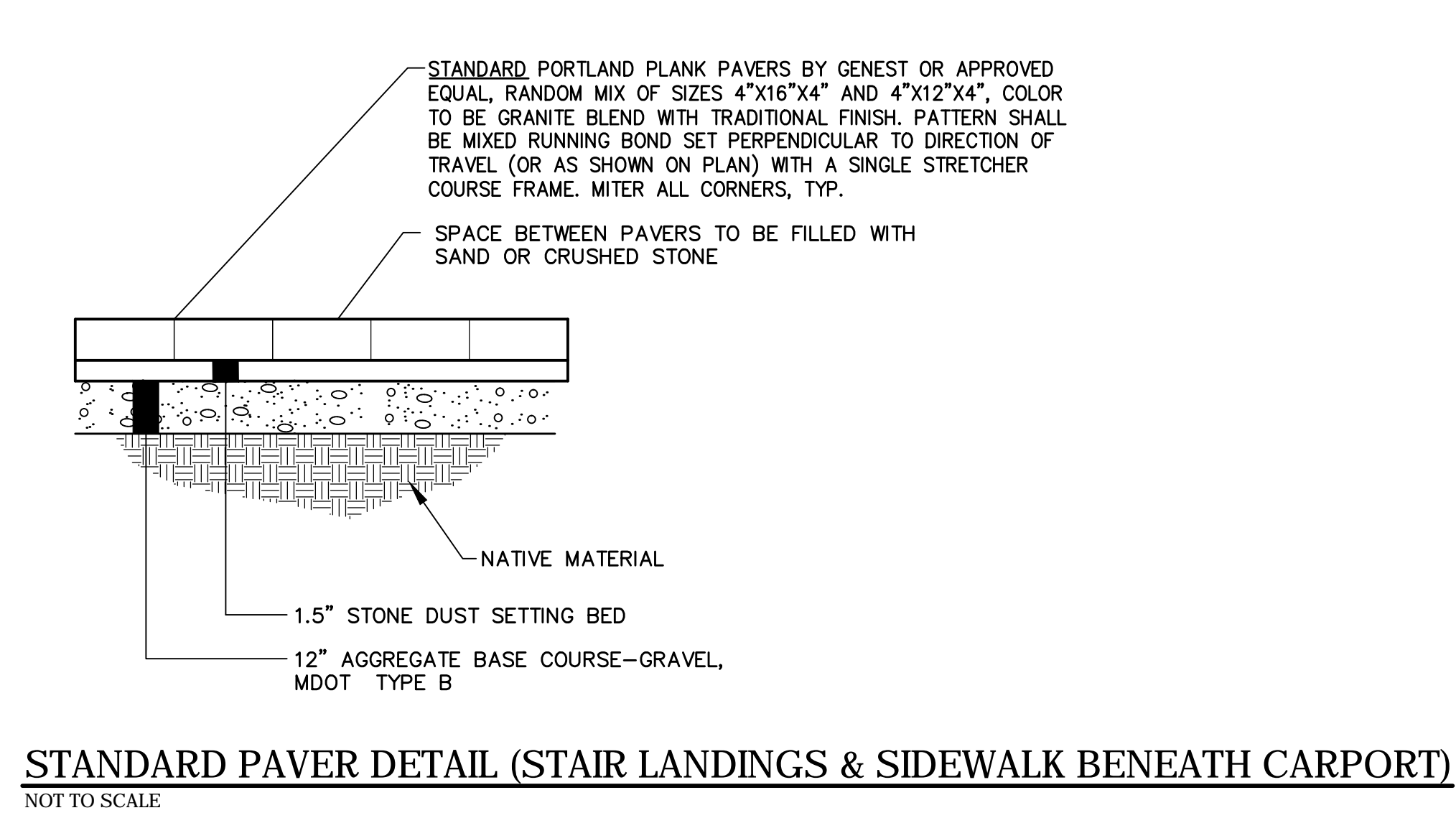
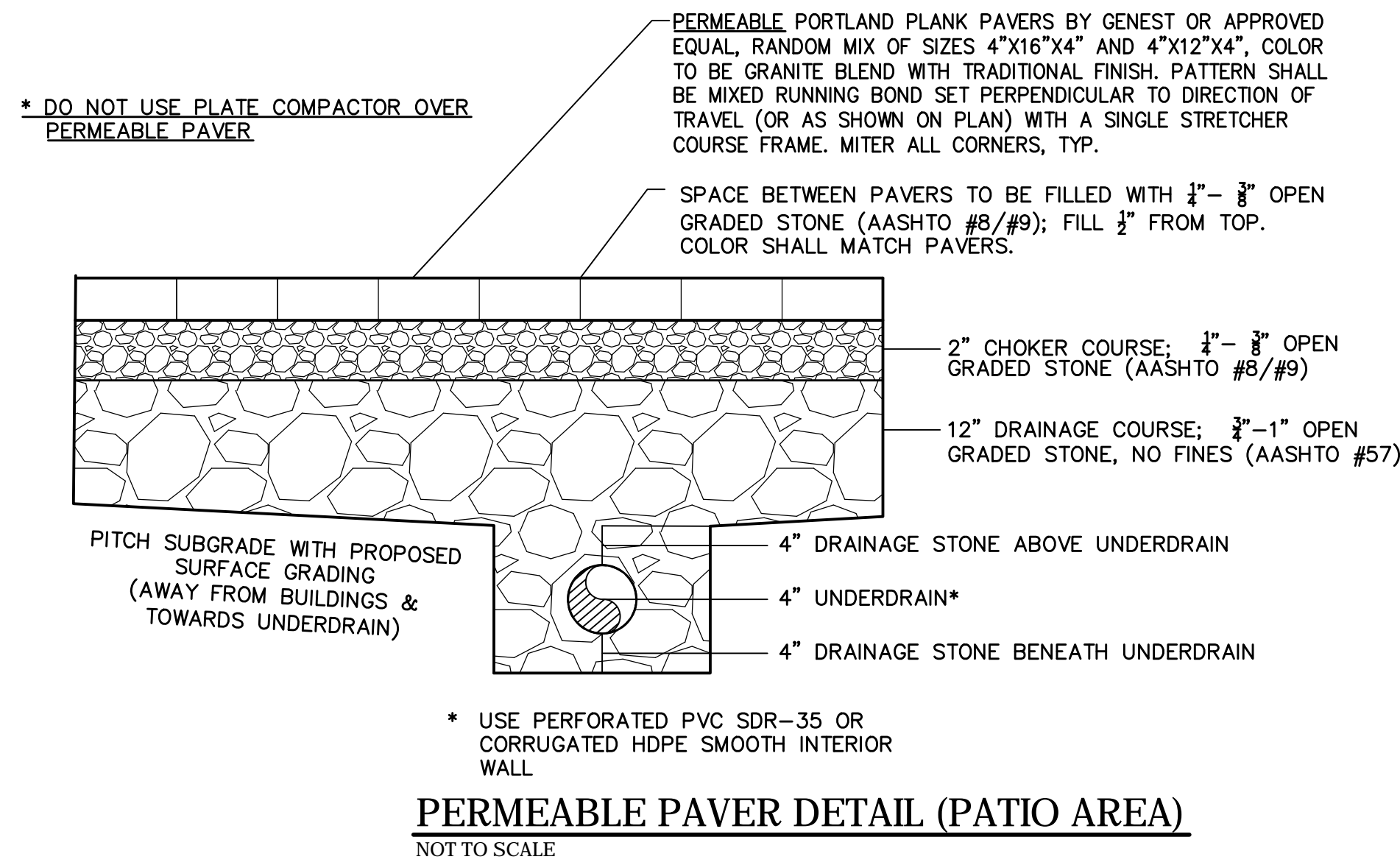
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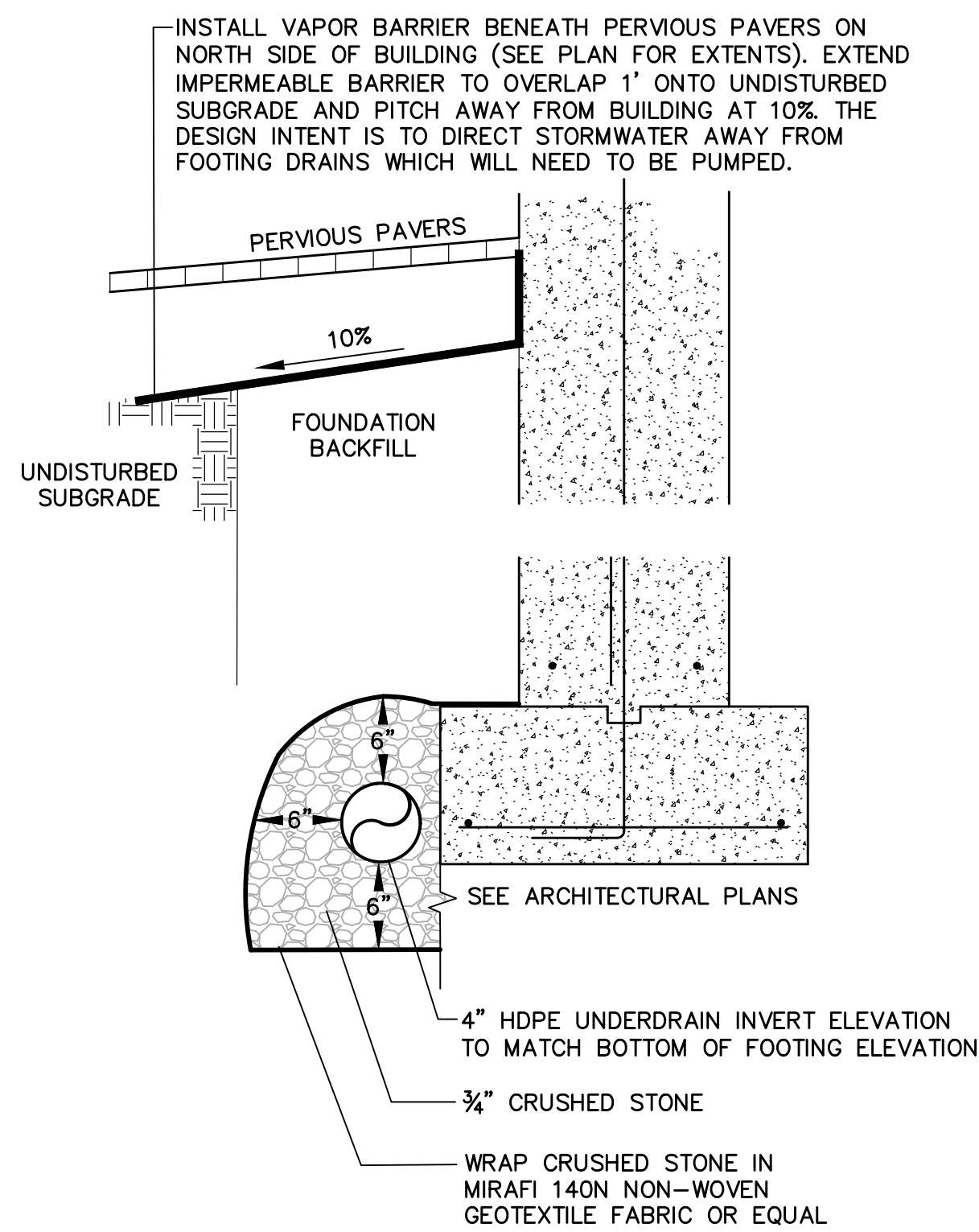


CIVIL DETAILS

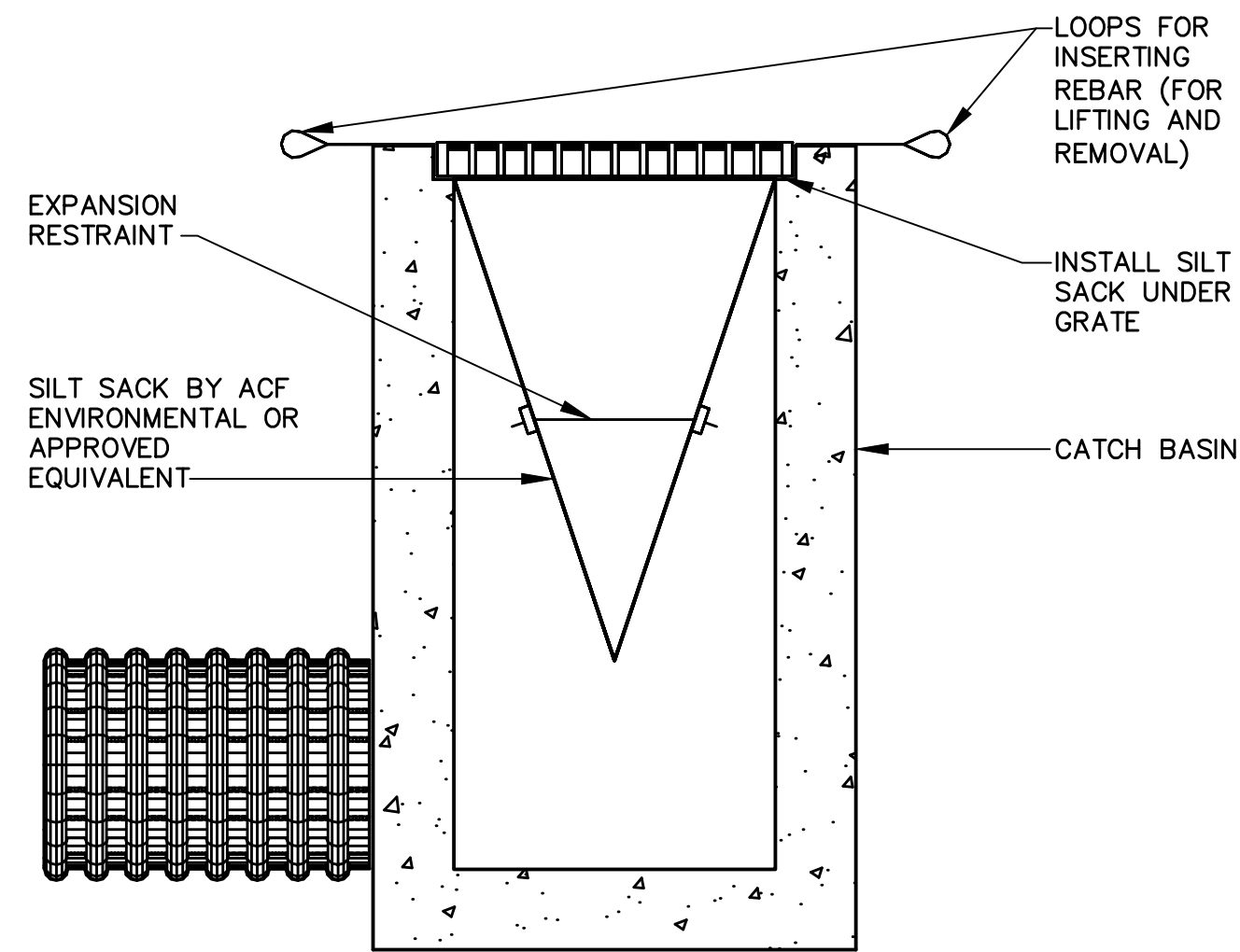
| C          | FOR PERMIT               | 12-14-16         |
|------------|--------------------------|------------------|
| B          | REVISED PER CITY COMMENT | 9-7-16           |
| A          | SITE PLAN PERMITTING     | 6-6-16           |
| No.        | Revision/Issue           | Date             |
| Design by: | JIM                      | Checked by: SJB  |
| Drawn by:  | JIM                      | Approved by: SJB |
| Project:   | 161.06035                |                  |

C3



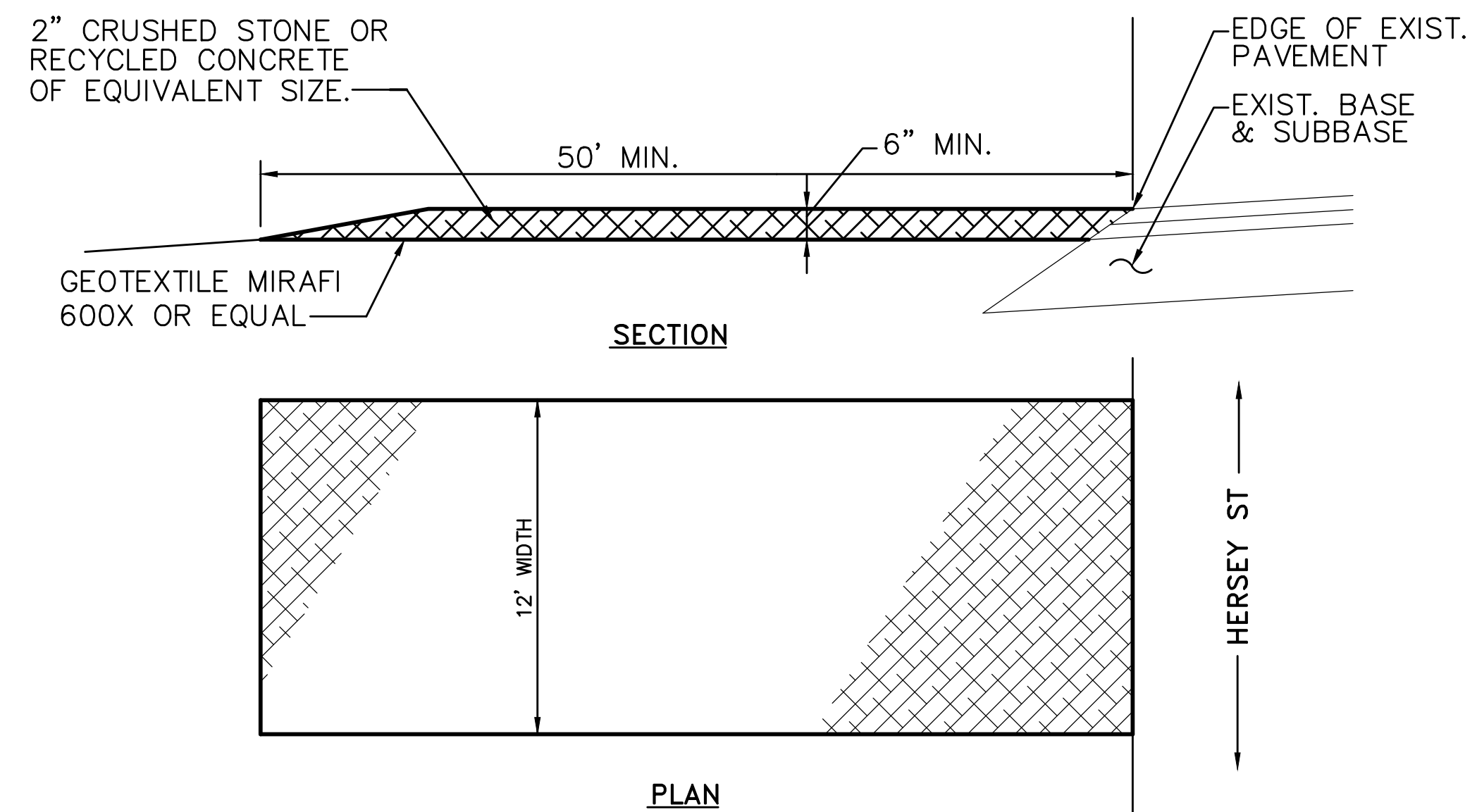


**FOOTING DRAIN DETAIL**  
NOT TO SCALE



- NOTES:
1. INSTALL SILTSACK PER MANUFACTURER'S RECOMMENDATIONS.
  2. SILTSACKS SHALL BE CHECKED FOR SEDIMENT LEVEL AND OVERALL CONDITION IMMEDIATELY AFTER EVERY RAIN EVENT AND AT LEAST EVERY DAY DURING PROLONGED RAINFALL.
  3. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE SILTSACK. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT WILL NOT ERODE.
  4. SEDIMENT SHALL ONLY BE REMOVED BY REMOVING THE SILTSACKS FROM THE CATCH BASINS ACCORDING TO MANUFACTURER RECOMMENDATIONS.
  5. CARE SHALL BE TAKEN TO AVOID SPILLING SEDIMENT WHILE REMOVING THE SILTSACK.
  6. ANY DAMAGED SILTSACK SHALL BE REPLACED WITH A NEW SILTSACK.

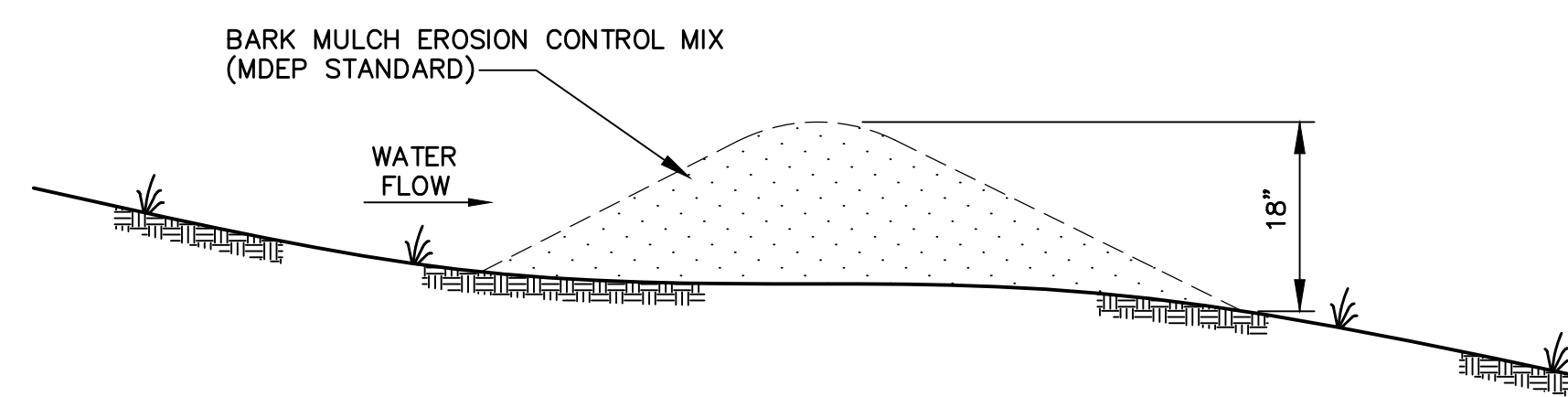
**INLET PROTECTION - SILT SACK**  
NOT TO SCALE



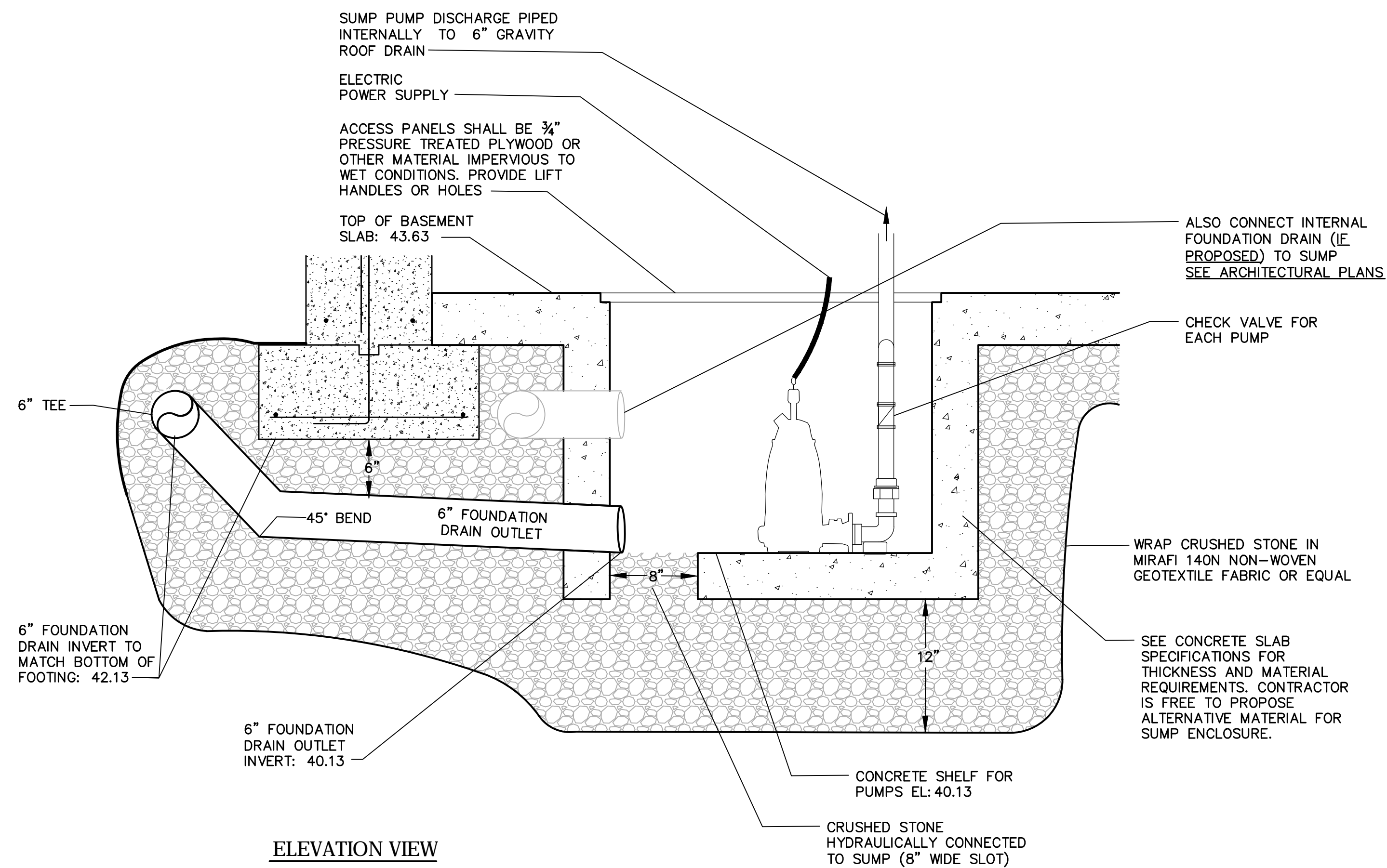
- NOTES:
1. MAINTAIN ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. IF WASHING IS REQUIRED PREVENT SEDIMENT FROM ENTERING WATERWAYS, DITCHES OR STORM DRAINS.
  2. REMOVE STABILIZED CONSTRUCTION ENTRANCE TO FINISH ROAD CONSTRUCTION & PAVEMENT.

**STABILIZED CONSTRUCTION ENTRANCE**

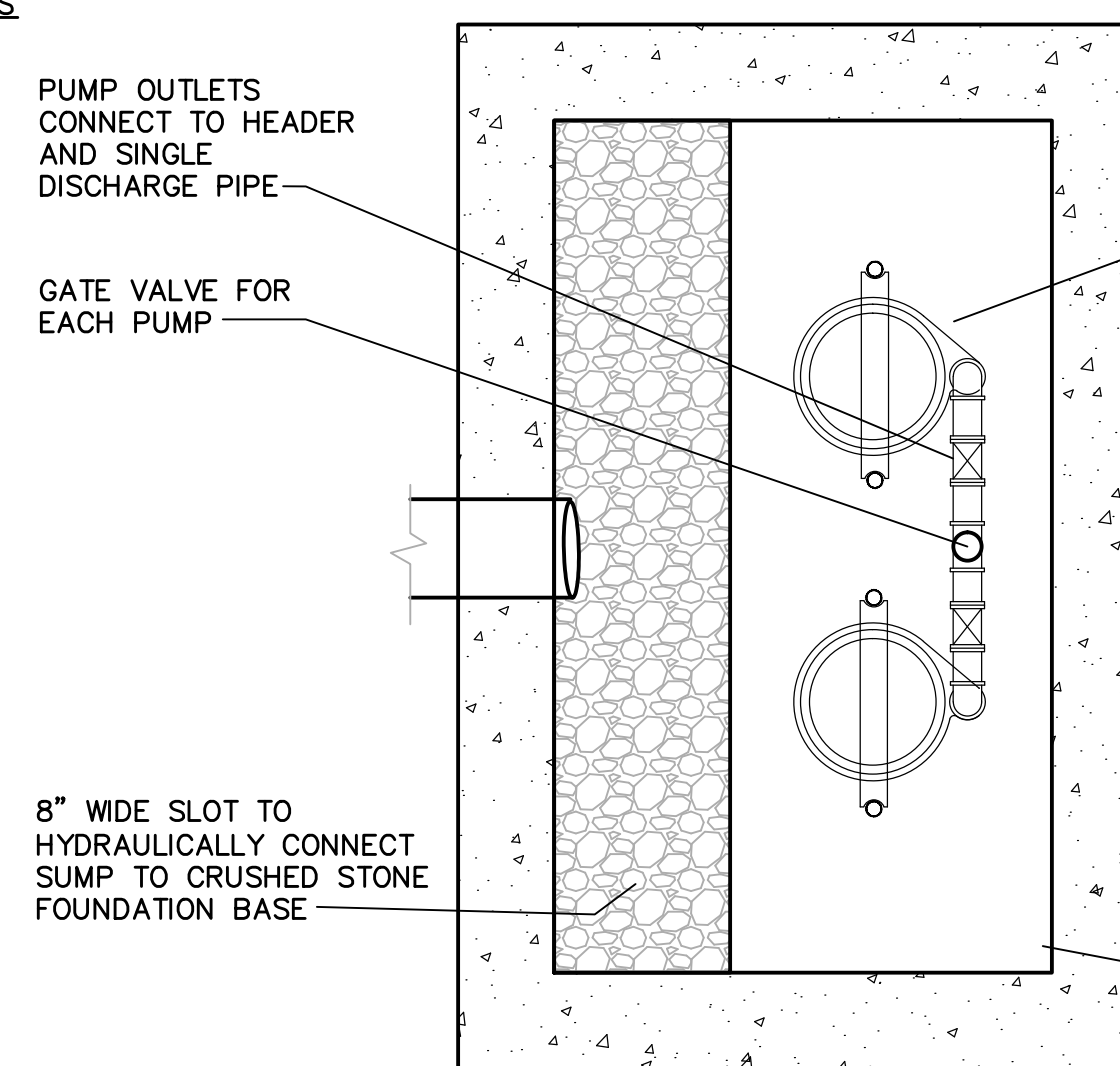
NOT TO SCALE



**MULCH BERM DETAIL**  
NOT TO SCALE



**ELEVATION VIEW**



**PLAN VIEW**

- INSTALL 2 COMMERCIAL GRADE SUMP PUMPS. ONE WORKING PUMP AND ONE BACKUP PUMP
- EACH PUMP SHALL HAVE AN INDIVIDUALLY CAPACITY OF 40 GALLONS PER MINUTE WITH 15' OF HEAD.
  - EACH PUMP SHALL BE ACTIVATED BY A SEPARATE FLOAT SWITCH.
  - THE BACKUP PUMP SHALL BE ACTIVATED AT A WATER ELEVATION APPROXIMATELY 3" HIGHER THAN THE ELEVATION THAT THE WORKING PUMP IS ACTIVATED.
  - A HIGH WATER ALARM SHALL BE ACTIVATED WHEN THE BACKUP PUMP IS ACTIVATED - OR - WHEN THE WATER ELEVATION REACHES AN ELEVATION OF 41.63
  - THE BACKUP PUMP SHALL BE ACTIVATED ("EXERCISED") ON A MONTHLY BASIS.
  - THE BACK UP PUMP AND THE WORKING PUMP SHALL BE SWITCHED ANNUALLY TO ENSURE EVEN WEAR.

DIMENSIONS OF SUMP SHALL BE BASED ON SIZE OF SELECTED PUMP PLUS REQUIRED CLEARANCE (APPROXIMATELY 2' X 3.5' PLUMBING CONTRACTOR TO VERIFY)

**FOUNDATION DRAIN SUMP DETAIL (SCHEMATIC DESIGN)**  
NOT TO SCALE

23 Ocean Avenue

23 OCEAN AVENUE, PORTLAND, MAINE

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Consultants:



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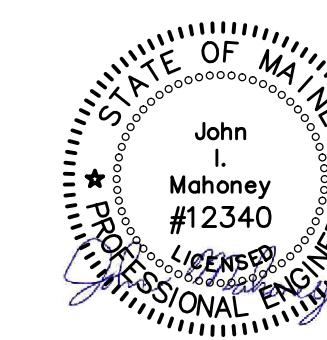


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CIVIL DETAILS

A FOR PERMIT 12-14-16

No. Revision/Issue Date

Design by: JIM Checked by: SJB  
Drawn by: JIM Approved by: SJB

Project:  
161.06035

Sheet No:

C4