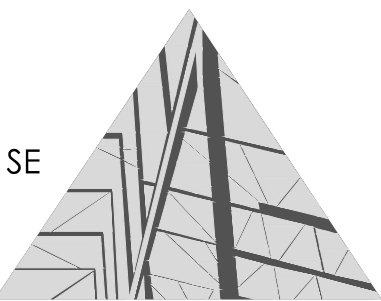


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CITY OF ROANOKE REFUELING CENTERS FIRE STATION #6

ROANOKE CITY PROJECT NO.: **RFP #24-10-66**
Spectrum Design Project No.: **23181**



PROJ. MGR.: **MAR** **CHECKED BY:** **MAR** **DRAWN BY:** **AGA**

SHEET ISSUE DATE:
10.10.2025

PROJECT PHASE:
BID DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

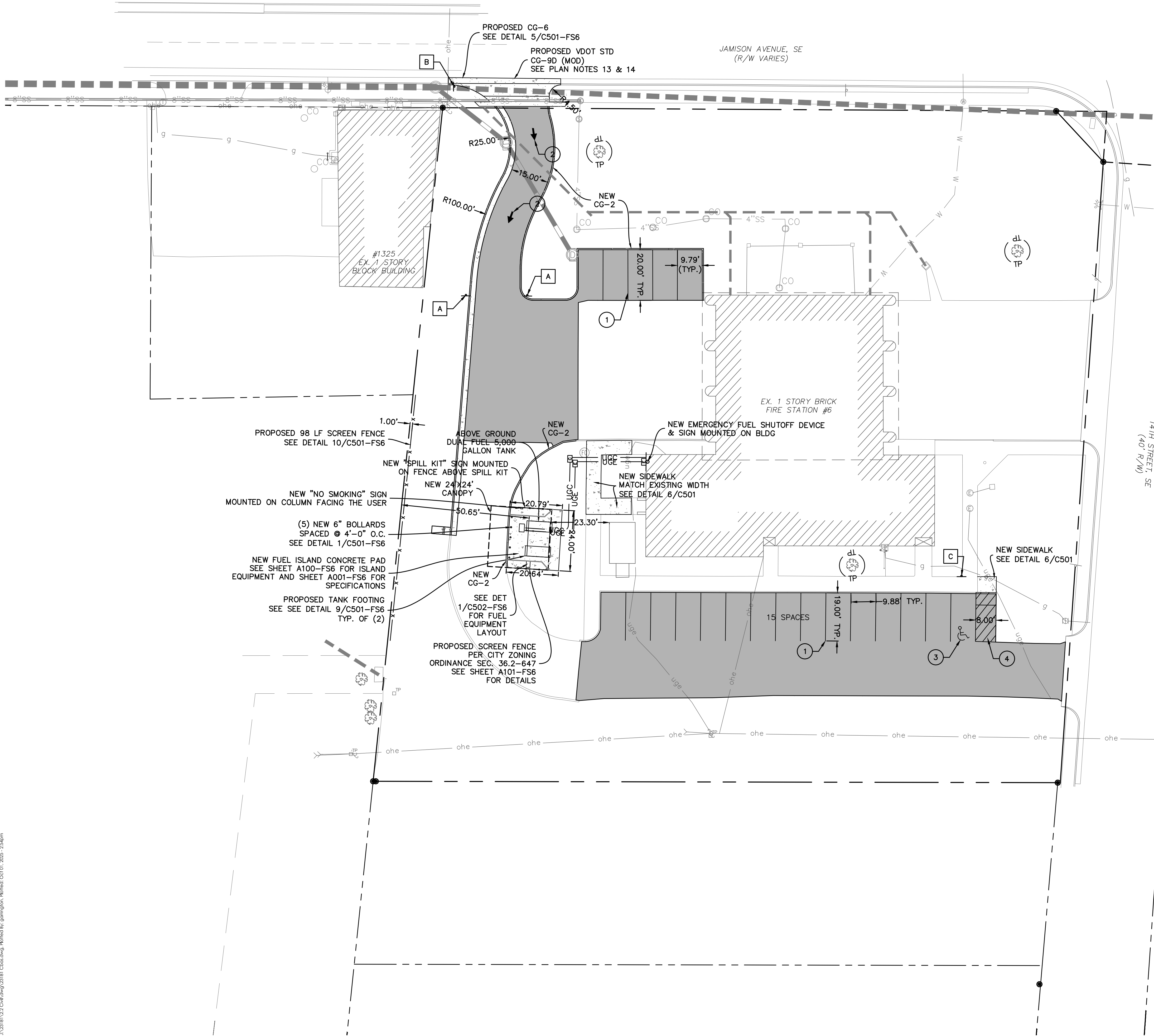
KEY PLAN:

SHEET NAME:
EXISTING CONDITIONS
& DEMOLITION PLAN

SHEET NUMBER:
C002-FS6

City of Roanoke
Planning, Building, & Development
COMPREHENSIVE DEVELOPMENT PLAN
APPROVED
by A.C. Cypher 10/20/2025

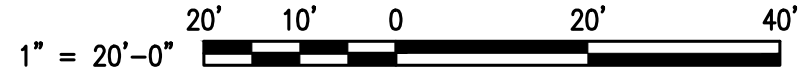
AHJ APPROVAL STAMP



- PLAN NOTES
1. LOCATION OF EXISTING UTILITIES SHOWN TO BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION.
 2. UNLESS OTHERWISE NOTED, ALL LINEAR AND RADIAL DIMENSIONS ARE TO THE FACE OF CURB.
 3. ALL CURB RADII 5' UNLESS NOTED OTHERWISE.
 4. ALL CONCRETE JOINTS SHALL BE BEVELED. SEE DETAIL 3/C501-FS6 FOR JOINT CONDITIONS AT FUEL ISLAND.
 5. WATERLINE AND SANITARY SEWER INSTALLATION TO BE IN ACCORDANCE WITH WESTERN VIRGINIA AUTHORITY STANDARDS AND DETAILS.
 6. NO CONSTRUCTION OR FIELD CHANGES ARE TO BE MADE WITHOUT APPROVAL FROM THE A/E, OWNER, AND CITY.
 7. SITE LIGHTING SHALL BE IN CONFORMANCE WITH CITY OF ROANOKE ZONING ORDINANCE SEC. 36.2-625. SITE LIGHTING/POWER SUPPLY/COMMUNICATIONS INFRASTRUCTURE - FOR REFERENCE ONLY. REFER TO ELEC. SHEETS FOR MORE INFORMATION.
 8. ALL PROPOSED SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND THE VDOT ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS, CURRENT EDITIONS UNLESS NOTED OTHERWISE.
 9. SIGN POSTS AND FOUNDATION SHALL BE IN ACCORDANCE WITH VDOT STD. STP-1.
 10. PROPOSED SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR. LOCATIONS SHALL BE MODIFIED, DEPENDING ON FIELD CONDITIONS, TO AVOID CONFLICT WITH UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS, AND TO COMPLY WITH THE STANDARDS IN NOTE 8.
 11. ALL SIGNS AND PAVEMENT MARKINGS ARE TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
 12. SIGNS THAT ARE TO REMAIN AND ARE LOCATED WITHIN THE DISTURBED AREA ARE TO BE REMOVED, STORED, AND REINSTALLED. CONTRACTOR SHALL BE RESPONSIBLE FOR STORAGE OF SIGNS, AS NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO NEW OR EXISTING SIGNS BEING REPLACED OR REINSTALLED.
 13. THE SIGHT DISTANCE AT PROPOSED ENTRANCES CONFORMS TO AASHTO GUIDELINES FOR INTERSECTION SIGHT DISTANCE.
 14. WORK IN THIS AREA IS TO BE PERFORMED PER THE CITY OF ROANOKE RIGHT OF WAY EXCAVATION AND RESTORATION STANDARDS.
 15. PROPOSED ASPHALT SECTION SHALL INCLUDE A PORTION OF THE EXISTING BASE STONE TO REMAIN. CONTRACTOR TO EXCAVATE TO PAVEMENT DEPTH, COMPACT EXISTING SUBBASE, AND ADD & COMPACT 21A STONE TO ACHIEVE PAVEMENT SECTIONS.

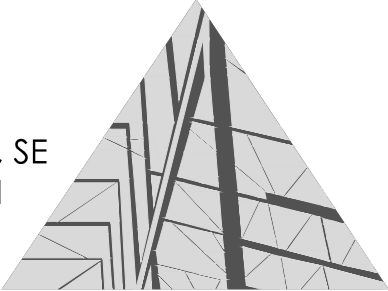
- SIGNAGE
- [A] R5-1: DO NOT ENTER
 - [B] R5-11: AUTHORIZED VEHICLES ONLY
 - [C] H/C VAN ACCESSIBLE PARKING SIGN SEE DETAIL 4/C501-FS6
- PAVEMENT STRIPING AND MARKING
- ① THERMOPLASTIC TYPE B, CLASS I ROAD MARKINGS AND STRIPING 4" WIDE, WHITE
 - ② DIRECTIONAL ARROWS THERMOPLASTIC TYPE B CLASS I, WHITE
 - ③ H/C SYMBOL SEE DETAIL 2/C501-FS6
 - ④ NO PARKING THERMOPLASTIC TYPE B, CLASS I ROAD MARKINGS 4" WIDE, WHITE, 1' OFFSET ON CENTER

- LEGEND
- PROPOSED ASPHALT PAVEMENT SEE DETAIL 7/C501-FS6 & PLAN NOTE 15
 - PROPOSED CONCRETE PAVEMENT SEE DETAIL 7/C501-FS6



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CITY OF ROANOKE
REFUELING CENTERS
FIRE STATION #6

ROANOKE CITY PROJECT NO.: RFP #24-10-66
Spectrum Design Project No.: 23181



PROJ. MGR.: CHECKED BY: DRAWN BY:
MAR MAR AGA

SHEET ISSUE DATE:
10.10.2025

PROJECT PHASE:
BID DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

KEY PLAN:

SHEET NAME:
DIMENSIONAL LAYOUT
& UTILITY PLAN

SHEET NUMBER:
C101-FS6

City of Roanoke
Planning, Building, & Development

COMPREHENSIVE DEVELOPMENT PLAN

APPROVED

by A.C. Cypher 10/20/2025

AHJ APPROVAL STAMP



ROANOKE CITY PROJECT NO.: **RFP #24-10-66**
Spectrum Design Project No.: **23181**



PROJ. MGR.: **MAR** CHECKED BY: **MAR** DRAWN BY: **AGA**

SHEET ISSUE DATE:
10.10.2025

PROJECT PHASE:
BID DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

KEY PLAN:

SHEET NAME:
**TANK PROXIMITY MAP
FOR PERMITTING**

SHEET NUMBER:
C103-FS6

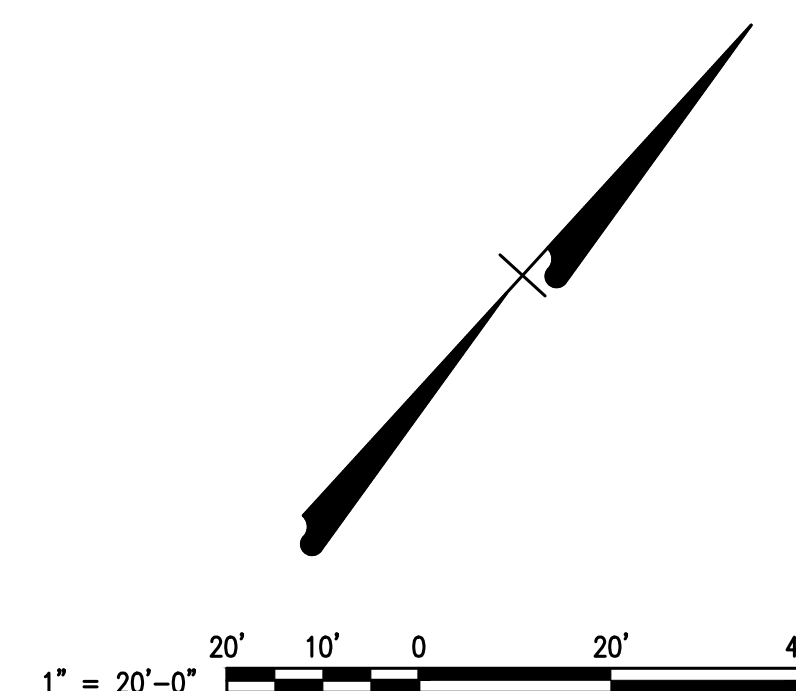
City of Roanoke
Planning, Building, & Development

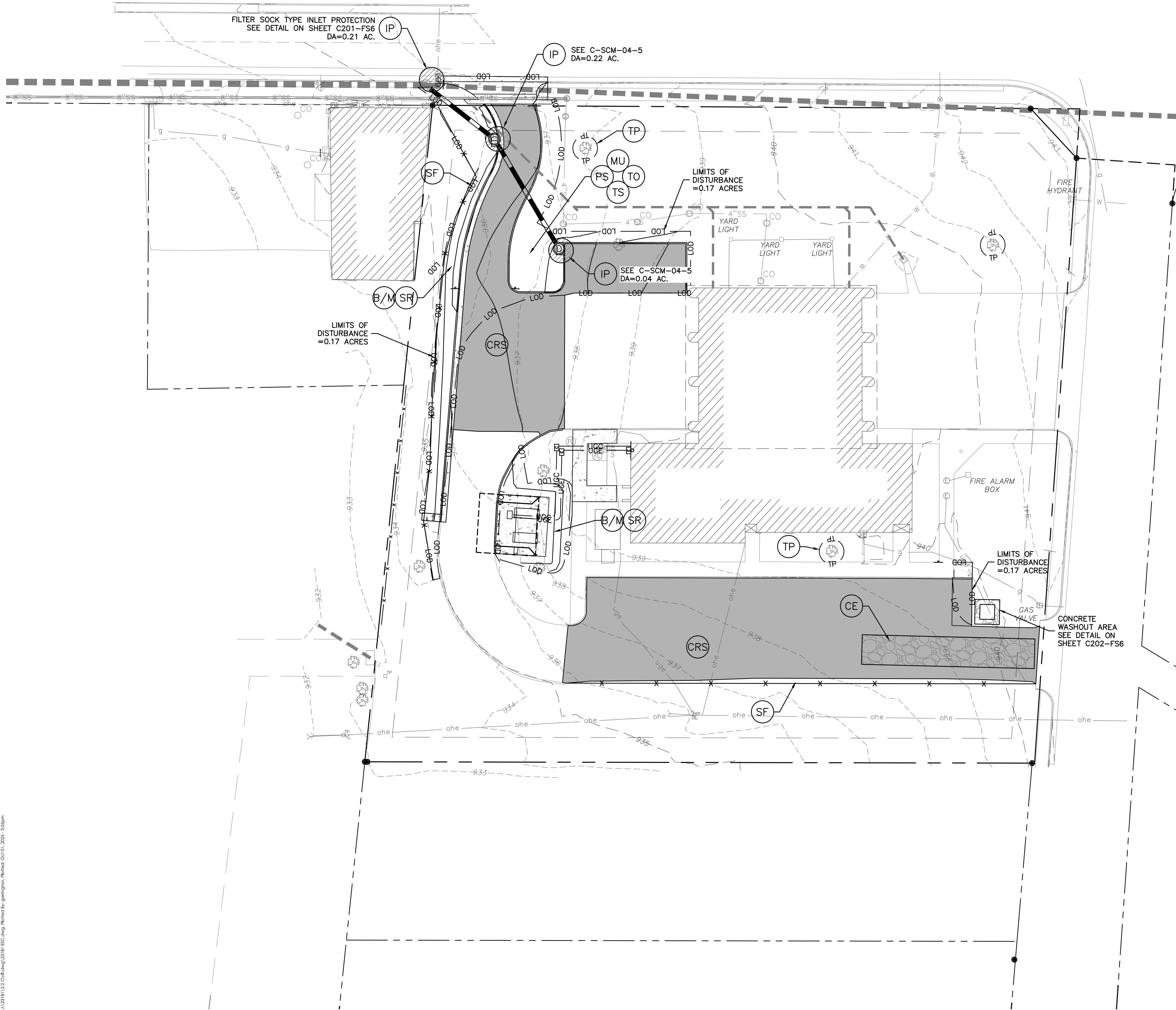
COMPREHENSIVE DEVELOPMENT PLAN

APPROVED

by A.C. Cypher 10/20/2025

LAHJ APPROVAL STAMP





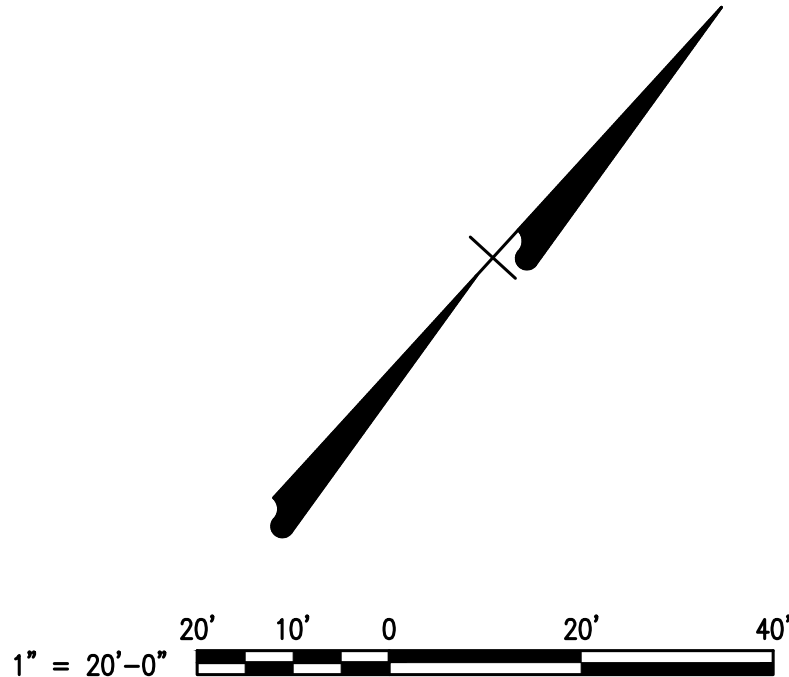
- SEQUENCE OF CONSTRUCTION
1. A PRECONSTRUCTION MEETING SHALL BE PERFORMED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
 2. ENSURE THERE IS NO EXISTING DAMAGE TO THE SITE AS A RESULT OF DEMOLITION. CONTRACTOR IS RESPONSIBLE FOR DAMAGES.
 3. INSTALL CONSTRUCTION ENTRANCES. ALL CONSTRUCTION TRAFFIC IS TO ENTER AND EXIT THE SITE THROUGH THE CONSTRUCTION ENTRANCES. DURING WET WEATHER, WHEELS ARE TO BE WASHED BEFORE ENTERING PUBLIC ROADS.
 4. CONTRACTOR TO PROVIDE STAGING AREA WITH PERIMETER FENCING.
 5. INSTALL PERIMETER CONTROL MEASURES INCLUDING TREE PROTECTION AND ADJACENT INLET PROTECTION. EXISTING INLET NEAR SOUTHERN PROPERTY CORNER IS TO BE CLEANED. CONTRACTOR TO ENSURE THIS INLET REMAINS CLEAR OF DEBRIS DURING CONSTRUCTION.
 6. CLEAR TO THE LIMITS OF CONSTRUCTION AS SHOWN BY THESE PLANS.
 7. ROUGH GRADE THE SITE TO PAVEMENT BASE ELEVATIONS. ANY AREAS REACHING FINAL GRADE ARE TO BE PERMANENTLY SEEDED.
 8. BEGIN TRENCHING OPERATIONS AND INSTALLATION OF UNDERGROUND UTILITIES. INSTALL ADDITIONAL INLET PROTECTION AS NECESSARY.
 9. INSTALL BASE STONE FOR PAVED AREAS.
 10. INSTALL REMAINING UTILITIES.
 11. COMPLETE REMAINING CUT/FILL OPERATIONS.
 12. INSTALL CURB AND GUTTER. BACKFILL AND SEED AREAS BEHIND CURB IMMEDIATELY AFTER INSTALLATION.
 13. INSTALL ASPHALT PAVEMENT AND CONCRETE SURFACES.
 14. TOPSOIL AND APPLY PERMANENT SEEDING TO ALL NON PAVED AREAS.
 15. REMOVE SEDIMENT TRAPPING DEVICES WHEN SUFFICIENT UPSLOPE STABILIZATION IS REACHED.
 16. REMOVE TEMPORARY CONTROL MEASURES.

CONTRACTOR TO ENSURE ADEQUATE VEHICLE ACCESS TO THE GARAGE BAYS AND SITE IS MAINTAINED AT ALL TIMES.

ENSURE REQUIRED PROTECTIVE BARRIER (SIGNAGE, CHAIN LINK FENCE, ORANGE SAFETY FENCE, SNOW FENCE, OR OTHER PROTECTIVE BARRIER) IS INSTALLED AROUND THE PERIMETER OF CONSTRUCTION AREA, AS REQUIRED.

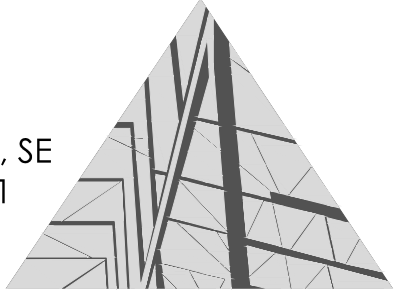
ESC LEGEND	
PROPOSED	DESCRIPTION
	SILT FENCE VSMH C-PCM-04
	CONSTRUCTION ROAD STABILIZATION VSMH C-SCM-02
	CONSTRUCTION ENTRANCE VSMH C-SCM-03
	INLET PROTECTION VSMH C-SCM-04
	TOPSOILING VSMH C-SSM-02
	SURFACE ROUGHENING VSMH C-SSM-03
	SOIL STABILIZATION BLANKETS & MATTING VSMH C-SSM-05
	TEMPORARY SEEDING VSMH C-SSM-09
	PERMANENT SEEDING VSMH C-SSM-10
	MULCHING VSMH C-SSM-11
	TREE PRESERVATION & PROTECTION VSMH C-SSM-01
	LIMITS OF DISTURBANCE

SEE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, CURRENT VERSION



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CITY OF ROANOKE
REFUELING CENTERS
FIRE STATION #6

ROANOKE CITY PROJECT NO.: RFP #24-10-66
Spectrum Design Project No.: 23181



PROJ. MGR.: CHECKED BY: DRAWN BY:
MAR MAR AGA

SHEET ISSUE DATE:
10.10.2025

PROJECT PHASE:
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AS SHOWN
24"x36" SHEET

KEY PLAN:

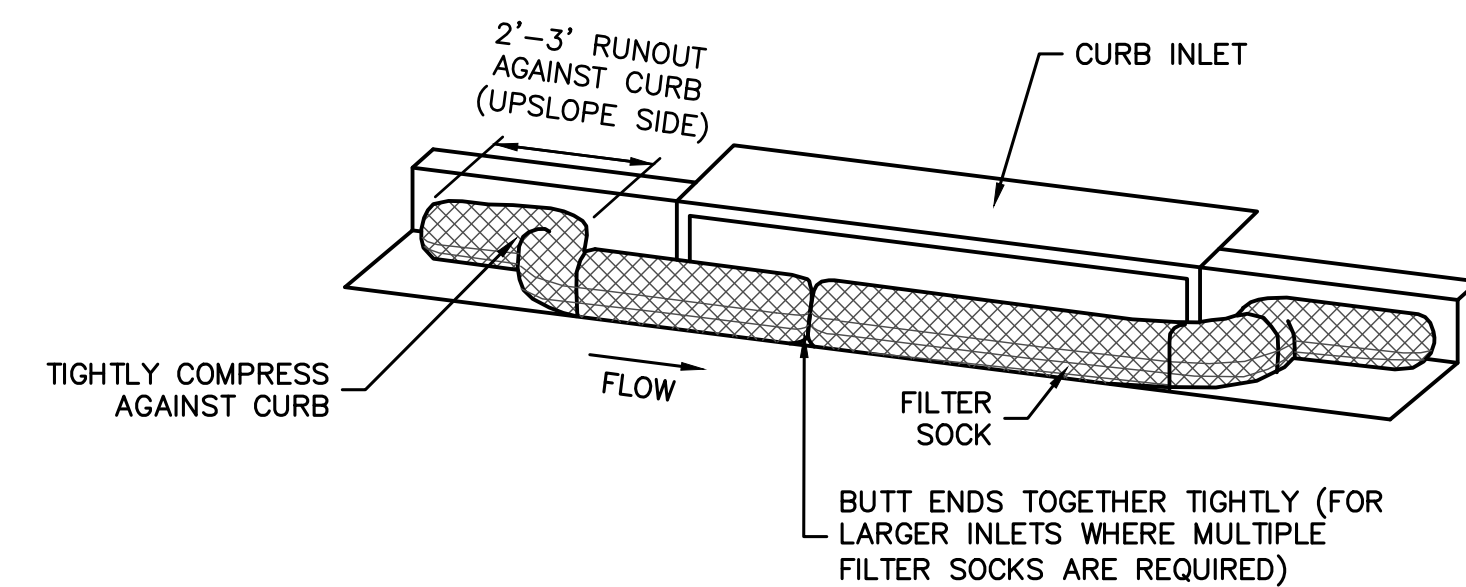
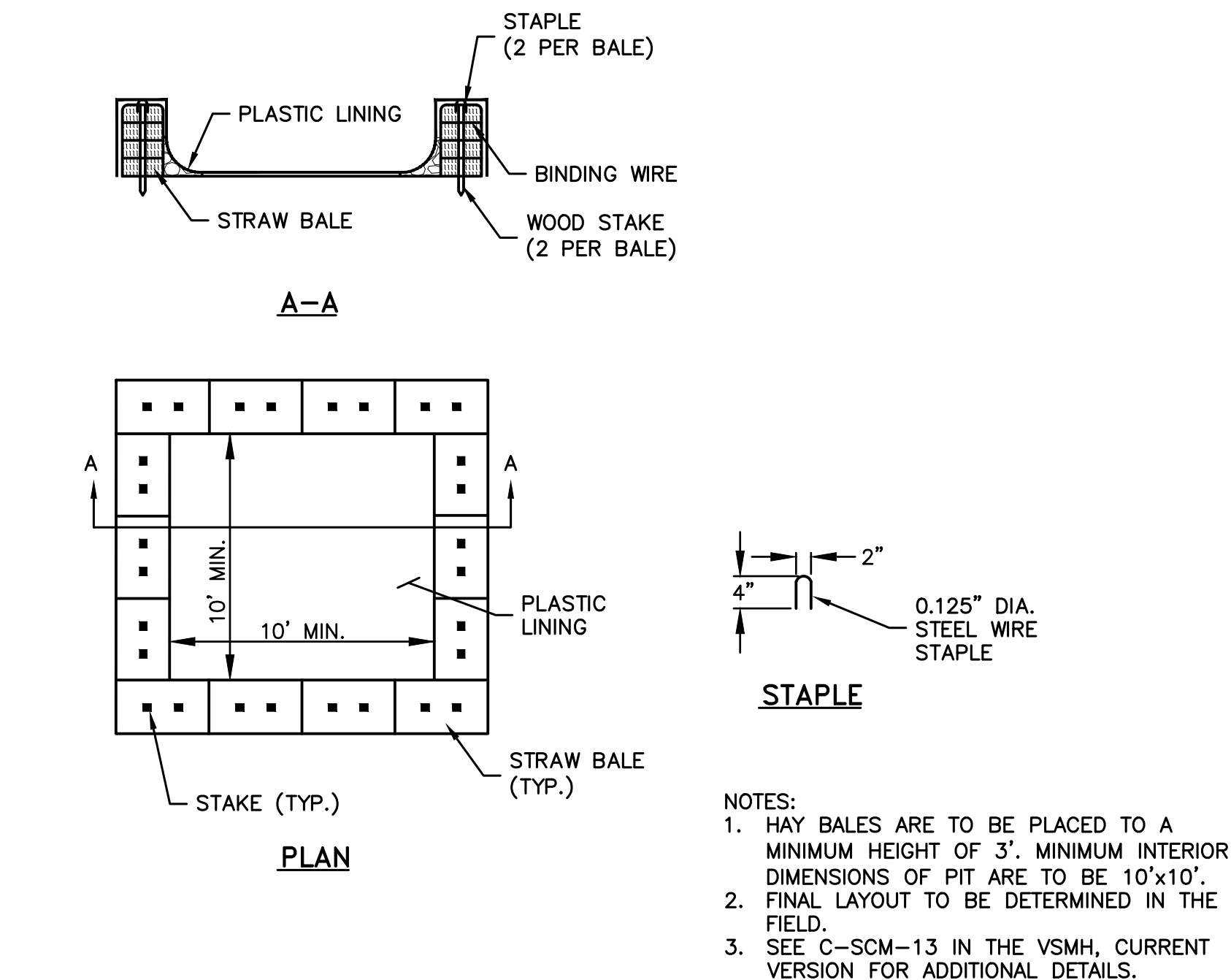
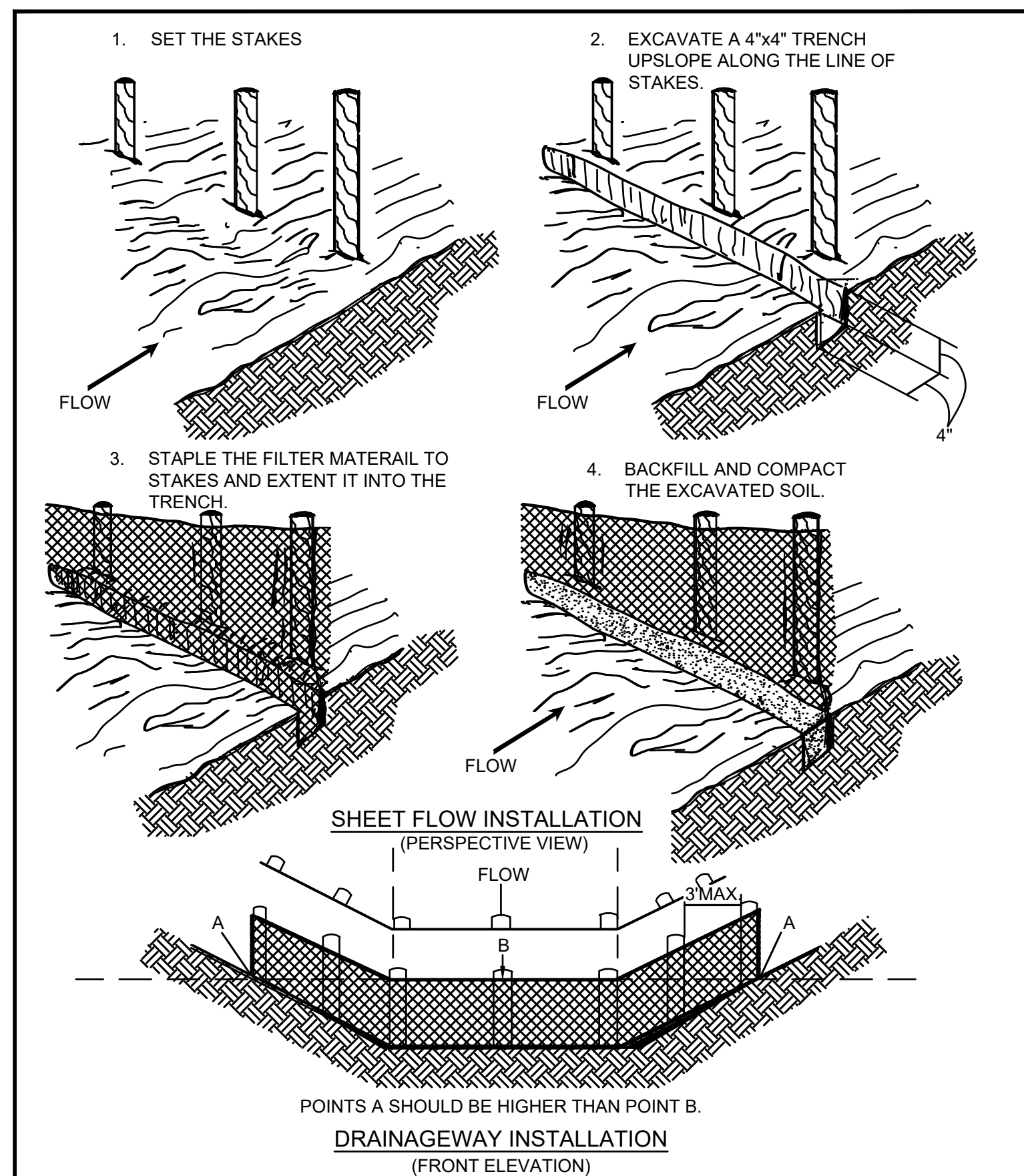
SHEET NAME:
EROSION & SEDIMENT
CONTROL PLAN

SHEET NUMBER:
C201-FS6

City of Roanoke
Planning, Building, & Development
COMPREHENSIVE DEVELOPMENT PLAN

APPROVED
by A.C. Cypher 10/20/2025

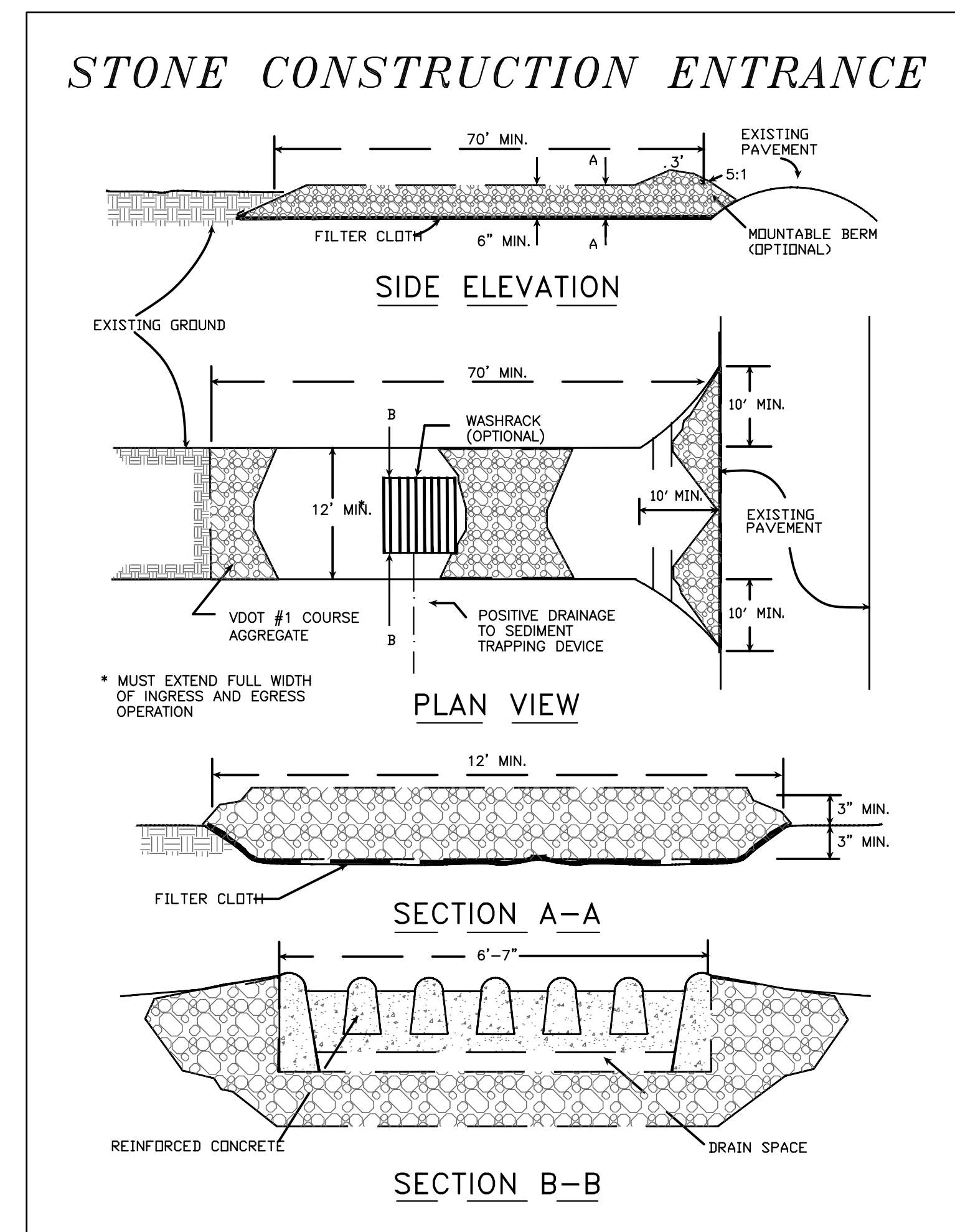
AHJ APPROVAL STAMP



CONSTRUCTION OF SILT FENCE WITHOUT WIRE SUPPORT

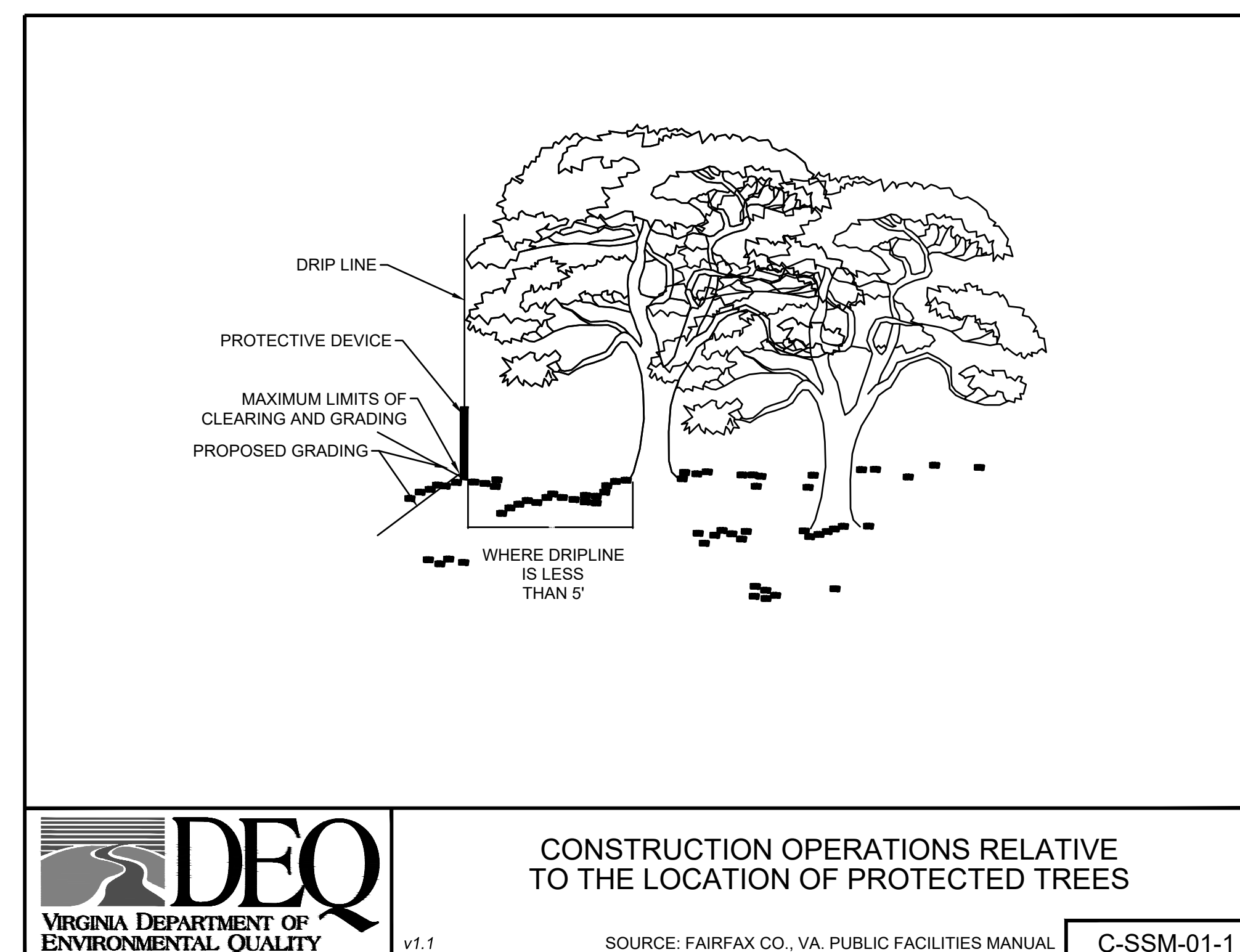
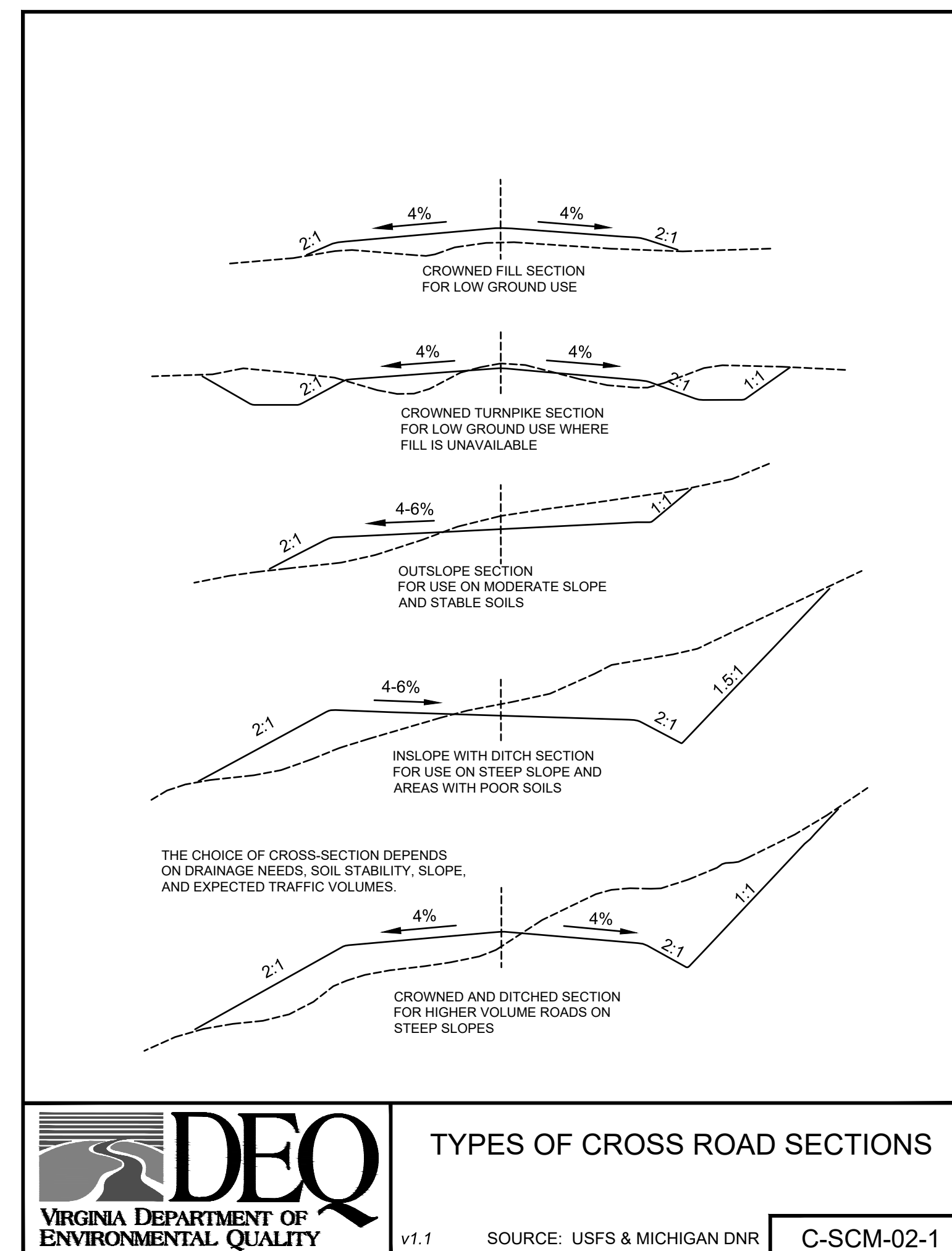
SOURCE: ADAPTED FROM STRAW &
v1.1 FAB. BARRIERS, SHERWOOD & WYANT

C-PCM-04-2B



SOURCE: ADAPTED FROM 1983 MARYLAND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, AND VA. DSWC

PLATE. 3.02-1



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CITY OF ROANOKE REFUELING CENTERS FIRE STATION #6

ROANOKE CITY PROJECT NO.: **RFP #24-10-66**
Spectrum Design Project No.: **23181**



PROJ. MGR.: CHECKED BY: DRAWN BY:

SHEET ISSUE DATE:
10.10.2025

PROJECT PHASE:
BID DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

KEY PLAN:

SHEET NAME:
**EROSION & SEDIMENT
CONTROL DETAILS**

SHEET NUMBER:

SHEET NUMBER:
C202-FS6

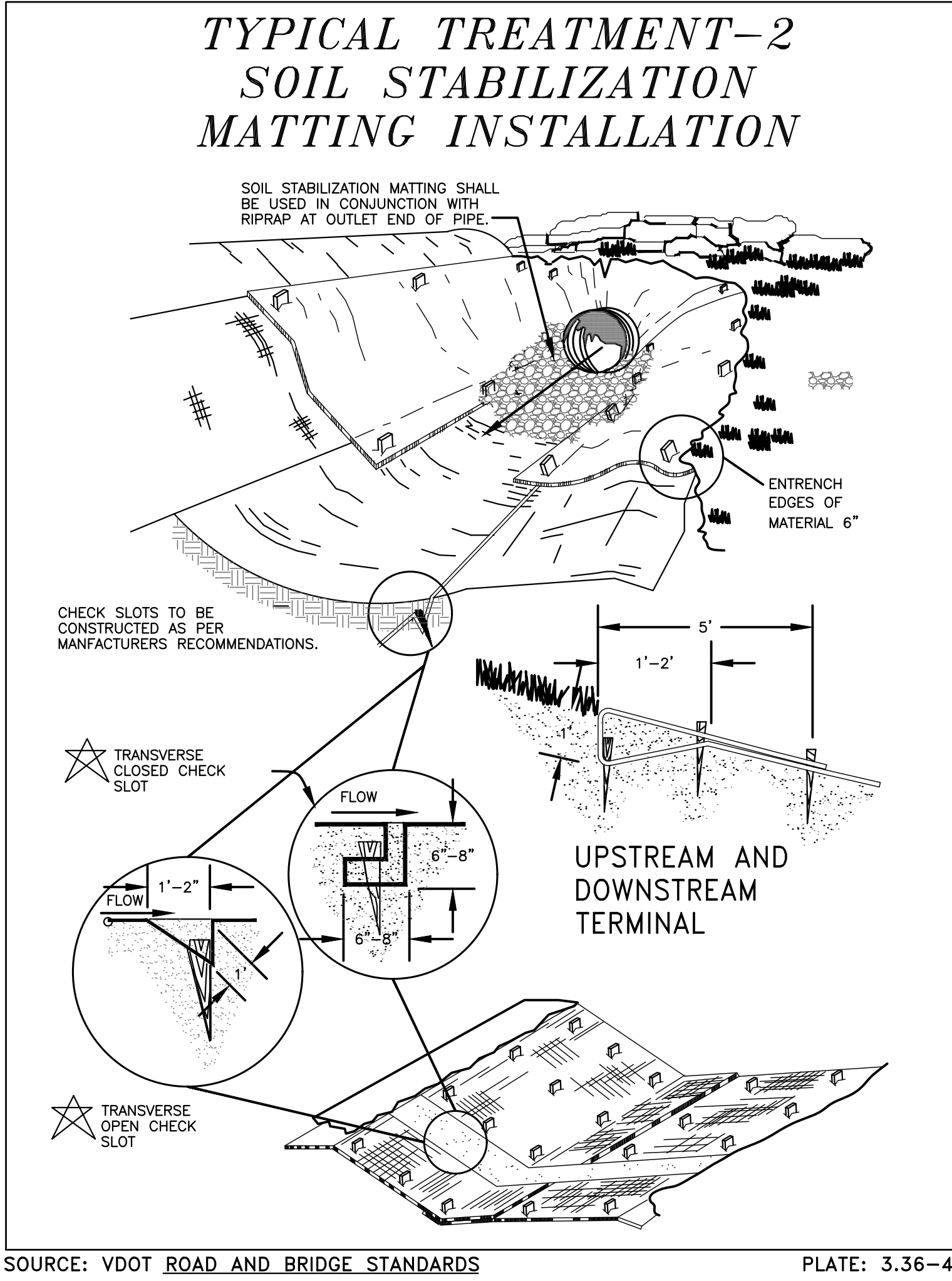
City of Roanoke
Planning, Building, & Development

COMPREHENSIVE DEVELOPMENT PLAN

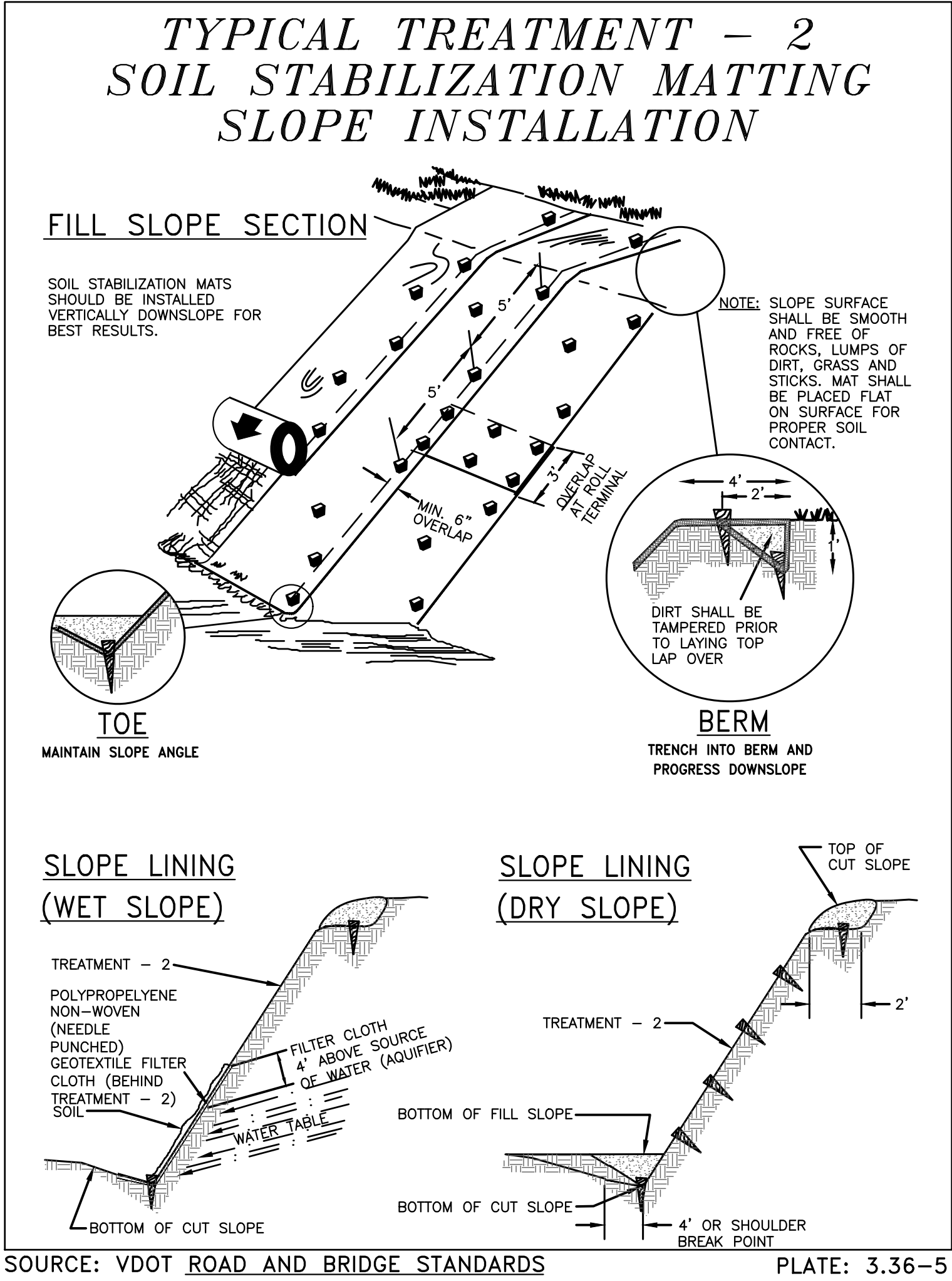
APPROVED

by A.C. Cypher 10/20/2025

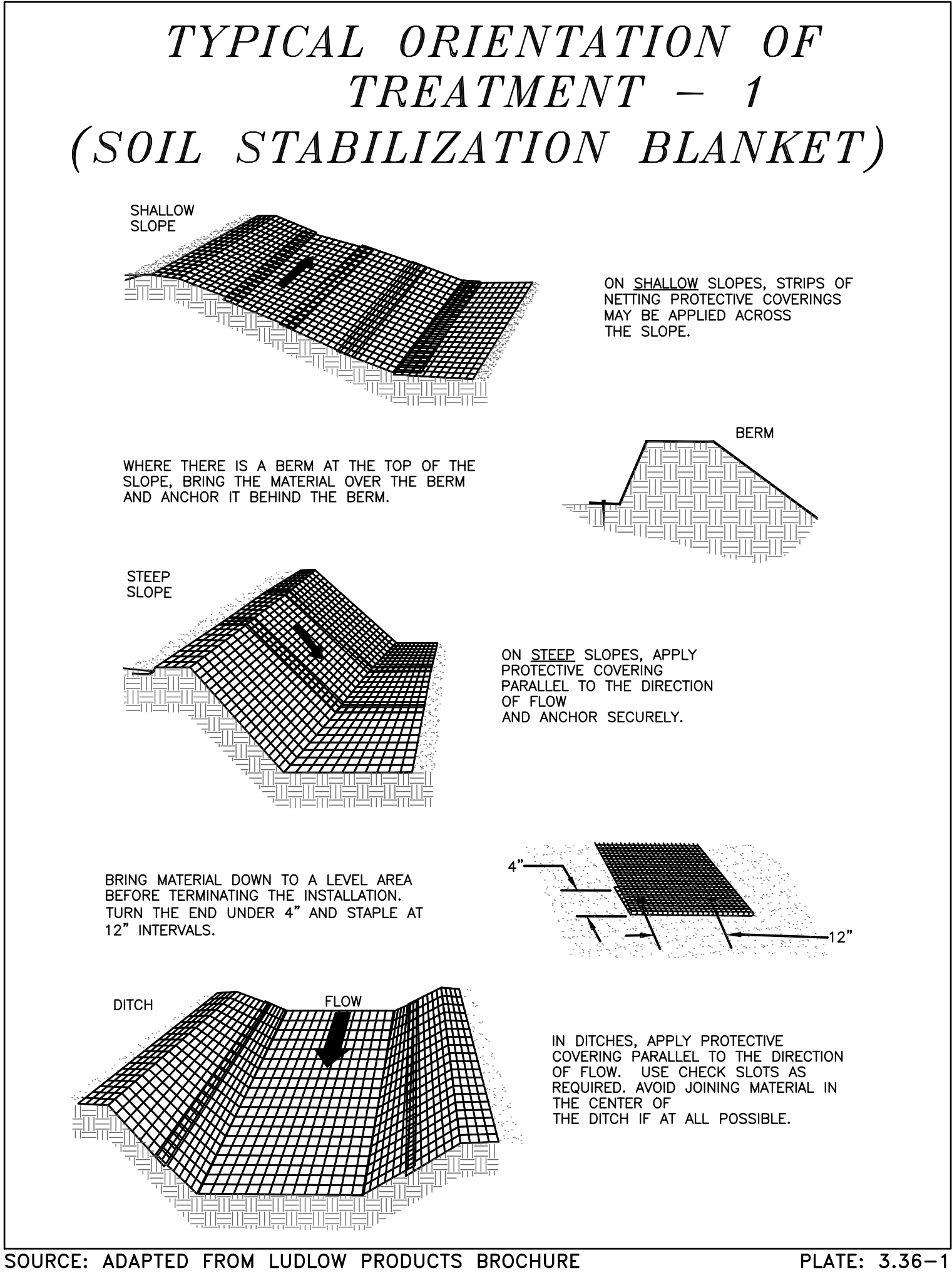
LAHJ APPROVAL STAMP



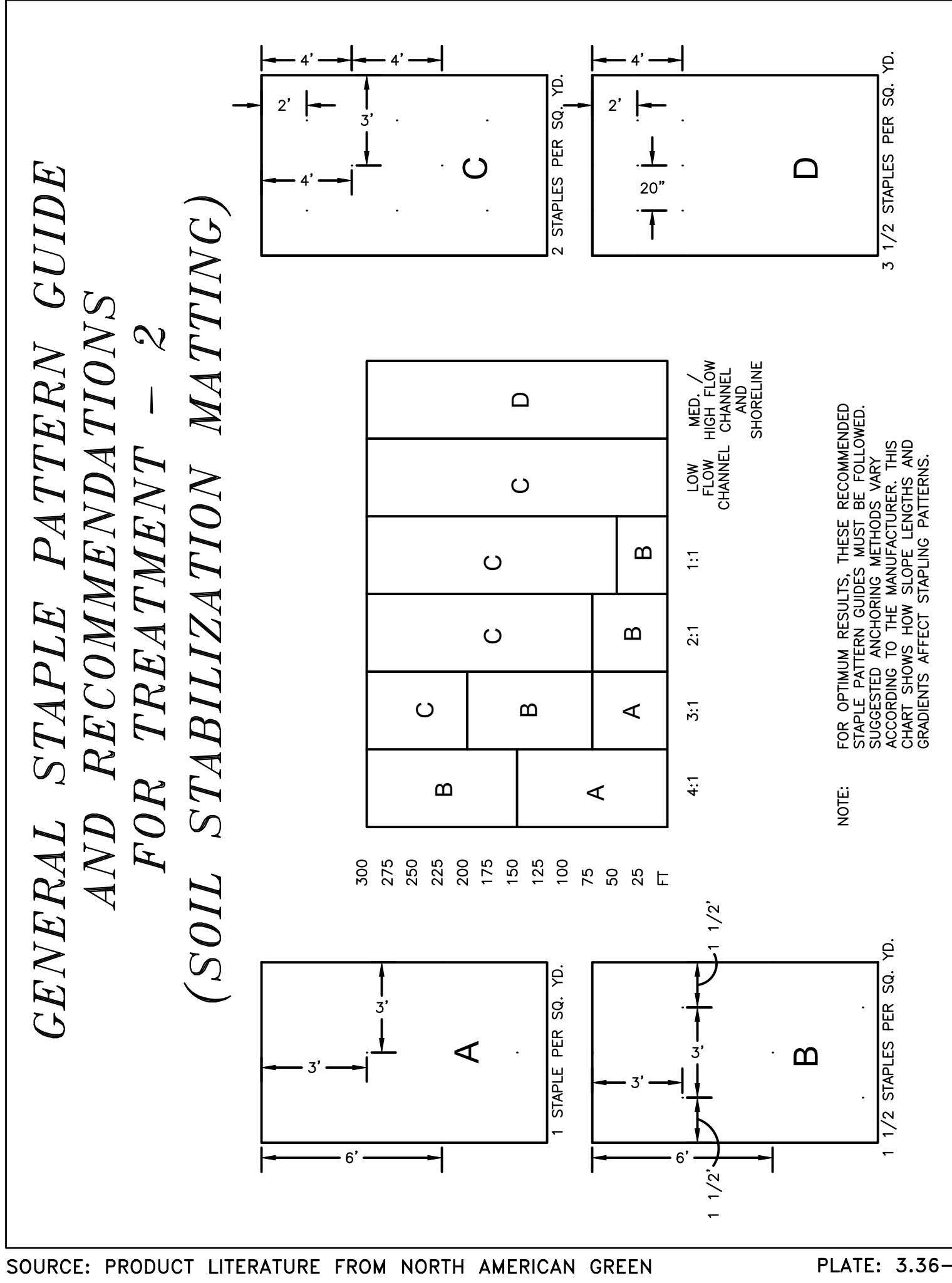
SOURCE: VDOT ROAD AND BRIDGE STANDARDS PLATE: 3.36-4



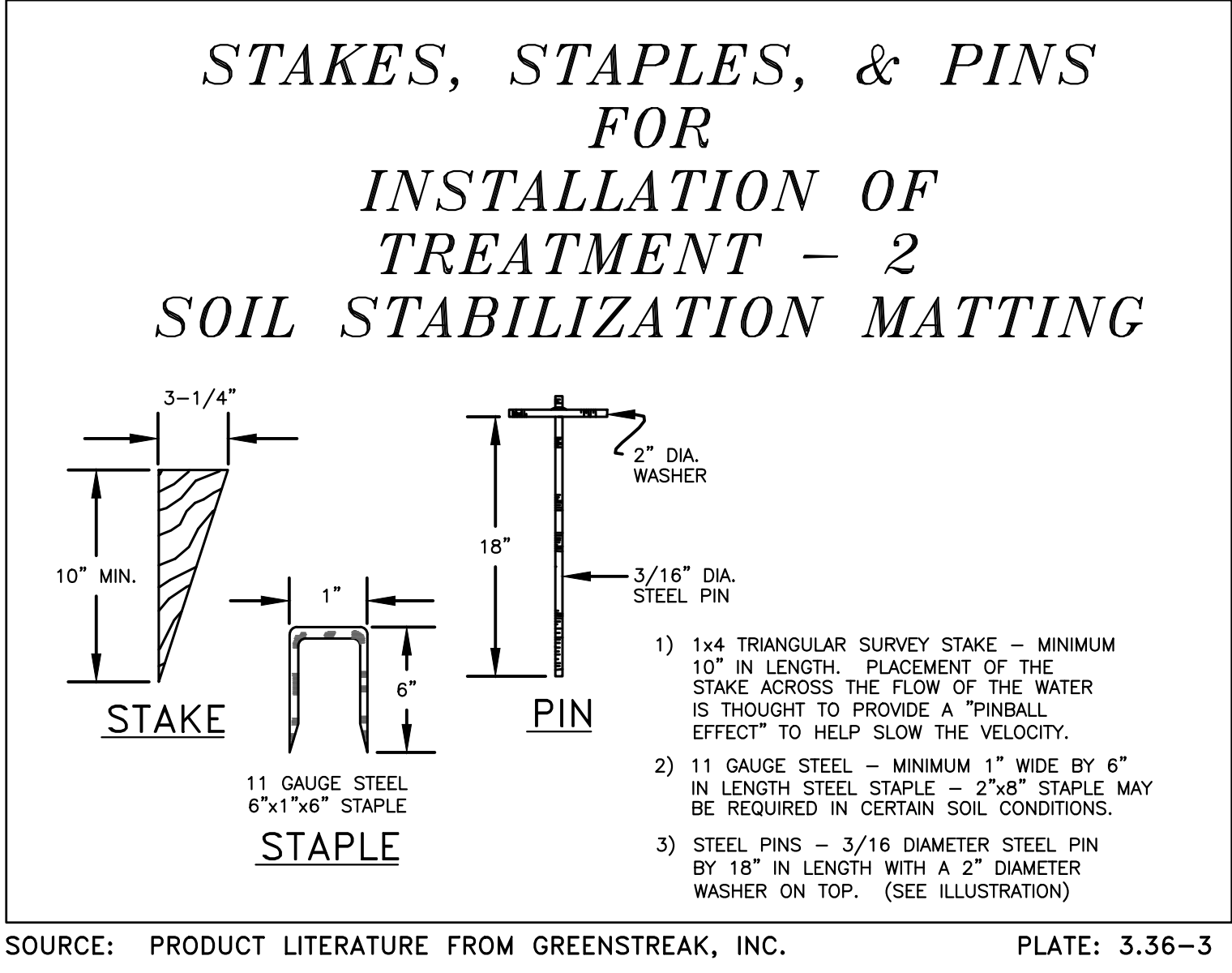
SOURCE: VDOT ROAD AND BRIDGE STANDARDS PLATE: 3.36-5



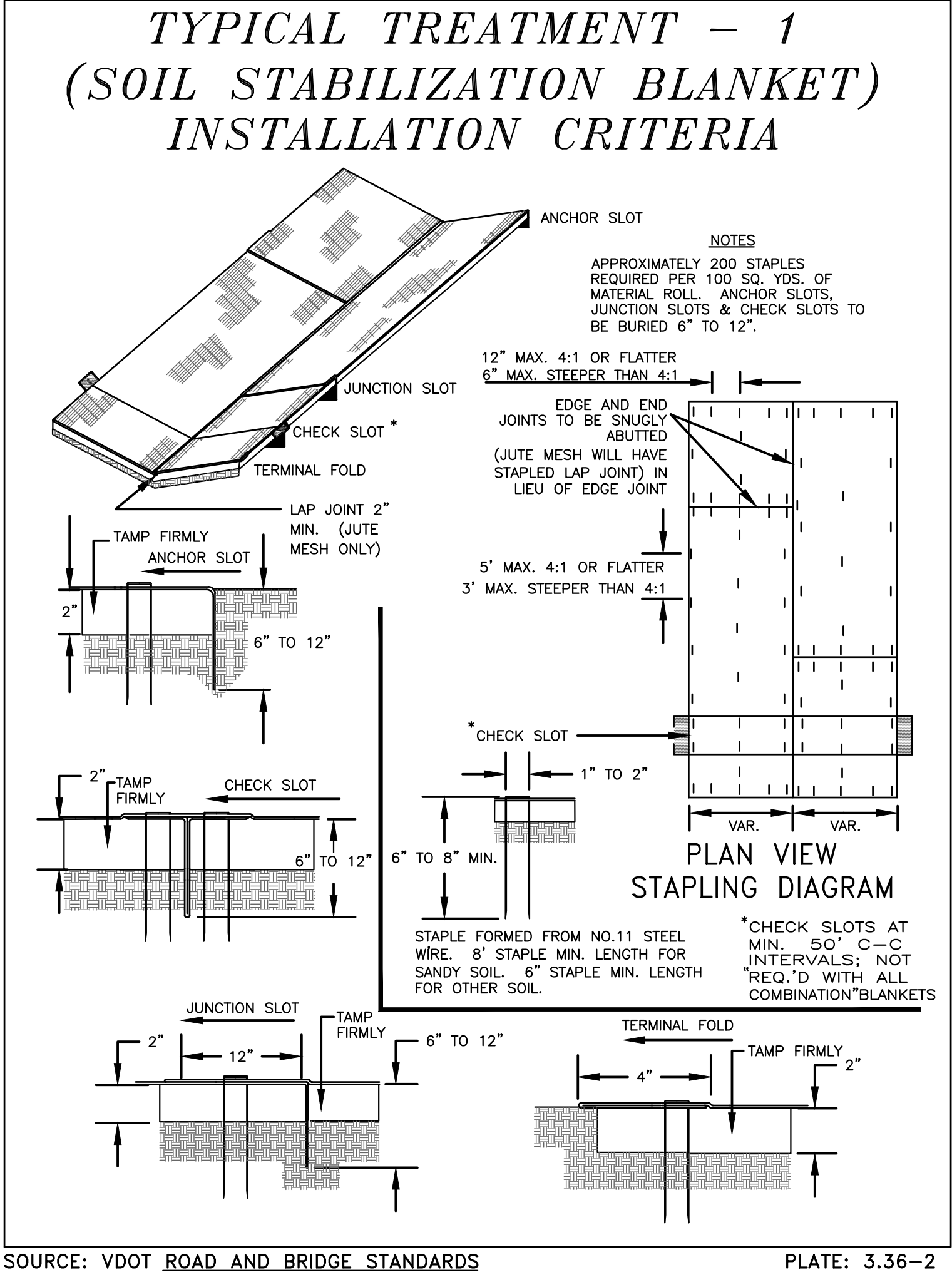
SOURCE: ADAPTED FROM LUDLOW PRODUCTS BROCHURE PLATE: 3.36-1



SOURCE: PRODUCT LITERATURE FROM NORTH AMERICAN GREEN PLATE: 3.36-6



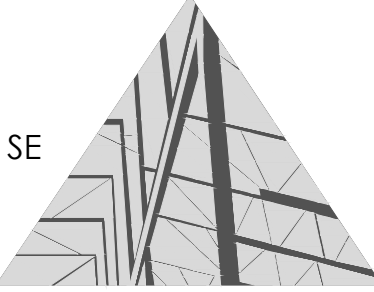
SOURCE: PRODUCT LITERATURE FROM GREENSTREAK, INC. PLATE: 3.36-3



SOURCE: VDOT ROAD AND BRIDGE STANDARDS PLATE: 3.36-2

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**CITY OF ROANOKE
REFUELING CENTERS
FIRE STATION #6**

ROANOKE CITY PROJECT NO.: **RFP #24-10-66**
Spectrum Design Project No.: **23181**



PROJ. MGR.: CHECKED BY: DRAWN BY:

SHEET ISSUE DATE:
10.10.2025
PROJECT PHASE:
BID DOCUMENTS
SCALE:
AS SHOWN
24"x36" SHEET

KEY PLAN:

SHEET NAME:
**EROSION & SEDIMENT
CONTROL DETAILS**

SHEET NUMBER:
C203-FS6

City of Roanoke
Planning, Building, & Development
COMPREHENSIVE DEVELOPMENT PLAN
APPROVED
by A.C. Cypher 10/20/2025

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MS-1 STABILIZATION OF DENUDED AREAS
 ✓ Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.

MS-2 STABILIZATION OF SOIL STOCKPILES
 ✓ During construction of the project, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.

MS-3 PERMANENT VEGETATION
 ✓ A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.

MS-4 TIMING AND STABILIZATION OF SEDIMENT TRAPPING MEASURES
 ✓ Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.

MS-5 STABILIZATION OF EARTHEN STRUCTURES
 ✓ Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.

MS-6 SEDIMENT BASINS
 ✓ Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.
 A. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.
 B. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outflow system shall be at a minimum, maintain the structural integrity of the basin during a twenty-five year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.

MS-7 CUT AND FILL SLOPES
 ✓ Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

MS-8 CONCENTRATED RUNOFF FLOW DOWN CUT OR FILL SLOPES
 ✓ Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

MS-9 WATER SEEPS FROM A SLOPE FACE
 ✓ Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.

MS-10 STORM SEWER INLET PROTECTION
 ✓ All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.

MS-11 STABILIZATION OF OUTLETS
 ✓ Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.

MS-12 WORK IN LIVE WATERCOURSES
 N/A When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.

MS-13 CROSSING A LIVE WATERCOURSE
 N/A When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided.

MS-14 APPLICABLE REGULATIONS
 N/A All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met.

MS-15 STABILIZATION OF BED AND BANKS
 N/A The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.

MS-16 UTILITY CONSTRUCTION
 ✓ Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
 a. No more than 500 linear feet of trench may be opened at one time.
 b. Erosion control material shall be placed on the uphill side of trenches.
 c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.
 E. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
 F. Restabilization shall be accomplished in accordance with these regulations.
 G. Applicable safety regulations shall be complied with.

MS-17 CONSTRUCTION ACCESS ROUTES
 ✓ Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities.

MS-18 TEMPORARY EROSION & SEDIMENT CONTROL MEASURE REMOVAL
 ✓ All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

1. Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed and maintained according to minimum standards and specifications of *Virginia Stormwater Management Handbook* and Virginia Regulations (VAC25-875) *Virginia Erosion and Stormwater Management Regulations*.
2. The plan approving authority must be notified one week prior to the pre-construction meeting, one week prior to the commencement of land disturbing activities, and one week prior to final inspection.
3. All erosion and sediment control measures are to be placed prior to or as the first step in clearing.
4. A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
5. Prior to commencing land disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas), the contractor shall submit a supplementary erosion control plan to the owner for review and approval by the plan approving authority.
6. The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the plan approving authority.
7. All disturbed areas are to drain to approved sediment control measures at all times during land disturbing activities and during site development until final stabilization is achieved.
8. During dewatering operations, water will be pumped into an approved filtering device.
9. The contractor shall inspect all erosion control measures periodically and after each runoff-producing rainfall event. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately.

PLATE. 3.29-4



PLANT MATERIAL FOR TEMPORARY SEEDING REQUIREMENTS*				
PLANTING DATES	ACCEPTABLE PLANT SPECIES	SCIENTIFIC NAME	SEEDING RATE (LBS/ACRE)	SOIL pH LIMING RATE (TON/ACRE)
SEPT 1 – FEB 15	50/50 MIX OF ANNUAL RYEGRASS AND WINTER RYE	LOLIUM MULTIFLORUM AND SECALE CEREALE	50–100	BELOW 4.2 3 4.2 TO 5.2 2 5.2 TO 6 1
FEB 16– APR 30**	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	60–100	
MAY 1** – AUG 31	GERMAN MILLET	SETARIA ITALICA	50	
*MULCH IMMEDIATELY IN ACCORDANCE WITH MULCHING TABLE ON THIS SHEET AND VA STORMWATER MANAGEMENT HANDBOOK.				
**THE SHIFT DATE FOR ANNUAL RYE TO GERMAN MILLET SHOULD BE APRIL 15 FOR THE PIEDMONT AND COASTAL PLAIN, RATHER THAN MAY 1.				
PERMANENT SEEDING MIXTURE REQUIREMENTS*				
SEED SPECIES	PERCENT OF TOTAL	SEEDING RATE (LBS/ACRE)	SEED MIXES ARE SUGGESTIONS FOUND IN THE VA STORMWATER MANAGEMENT HANDBOOK AND ARE SUBJECT TO MODIFICATION BASED ON SITE-SPECIFIC CONDITIONS BY AN AGRONOMIST OR OTHER QUALIFIED REVEGETATION PROFESSIONALS. ALL SEED RATES ARE EXPRESSED AS PURE LIVE SEED (PLS) AS SHOWN IN TABLE C-SSM-10-9 OF THE VA STORMWATER MANAGEMENT HANDBOOK.	
TURF-TYPE TALL FESCUE	95–100%	150–200		
KENTUCKY BLUEGRASS	0–5%			
IMPROVED PERENNIAL RYEGRASS	0–5%			
*MULCH IMMEDIATELY IN ACCORDANCE WITH MULCHING TABLE ON THIS SHEET AND VA STORMWATER MANAGEMENT HANDBOOK.				

AHJ APPROVAL STAMP

EROSION AND SEDIMENT CONTROL NARRATIVE

RESPONSIBLE LAND DISTURBER

Upon award of the Construction Contract, the Contractor shall employ a Responsible Land Disturber, who is certified by the Department of Environmental Quality (DEQ), to assume this responsibility for the project. The name of this person is to be designated in writing by the Contractor to the State ESC plan approving authority, the A/E, and the Owner along with copies of their certification prior to any land disturbance. The Responsible Land Disturber for this project shall be in charge of and is responsible for carrying out the land-disturbing activities on this project. Should the certified Land Disturber change at any time during the life of this project then the Land Disturbing Permit will become void, and a new Permit must be obtained. Hereinafter RLD shall be interpreted as the Responsible Land Disturber. Relative to the SWPP Plan the RLD shall be the "Operator".

STORM WATER POLLUTION PREVENTION PLAN & REGISTRATION STATEMENT

A Virginia Pollutant Discharge Elimination System (VPDES) Permit for the Discharge of Stormwater from Construction Activities is required for projects disturbing one (1) acre or greater. Disturbance for this project is less than 1 acre (0.17 acres) and is exempt from the requirements of the VPDES Permit.

PROJECT DESCRIPTION

The purpose of this project is for the addition of a fueling station at the City of Roanoke's Fire Station #6. Site improvements include a new concrete pad for the fuel tanks, dispensing and associated items, replacement of a portion of the existing access road, a new site entrance from Jamison Avenue SE, and a new parking area for trailer parking. Fire Station #6 is located at 1333 Jamison Avenue SE. The disturbance for this project is 0.17 acres. The construction will increase the net impervious cover of the site by 0.09 acres. For the purposes of this narrative, the "site" shall be defined as the area to be disturbed on the subject property.

EXISTING SITE CONDITIONS

The area of construction is on a portion of Tax #4220316. The existing site contains the City of Roanoke Fire Station #4 along with off street parking and access to 14th Street SE. All existing utilities serving the Fire Station are underground. Existing water and sanitary connections to the Fire House are from mains along Jamison Avenue SE. Gas is provided to the Eastern corner of the Fire House from 14th Street SE. Underground and overhead electric connections are from two utility poles located along the SE property line.

ADJACENT PROPERTY

Generally, the site is surrounded by commercial neighborhood and residential properties within the Kenwood neighborhood. The site is directly bound by Jamison Avenue SE to the Northwest, 14th Street SE to the Northeast, residential parcel 4220317 to the Southeast, and shares the Southwest property line with Advanced Auto Parts and SaVida Health.

OFF-SITE AREAS

No off-site disturbance is anticipated by these plans.

Should land disturbance at any off-site area be needed, the Contractor shall submit to City of Roanoke Planning, Building and Development a copy of plans, land disturbing permit, and/or agreement in lieu of approved by the appropriate Federal, State, or local authorities.

Should some material be wasted off-site to a site owned by others or the Contractor, it is the Contractor's responsibility to assure that said source has a current, approved Erosion Control Plan in accordance with the Virginia Stormwater Management Handbook, current version.

Should borrow, excavation waste or spoil areas proposed not have a current approved ESC Plan, an ESC Plan shall be submitted and approved by the Department of Environmental Quality and local authorities prior to any land disturbance in accordance with the Erosion Control notes in these plans and Virginia State Laws.

SOILS

No formal subsurface exploration has been completed for this construction.

NRCS Soil Survey information of the existing soils is found in Section 1.0 of the Erosion & Sediment Control and Stormwater Management Plan. Soil boundaries are shown on the Drainage Maps found in Appendix B of the Narrative.

CRITICAL EROSION AREAS

The existing site consists of stabilized grass and paved areas that may become disturbed during construction activities. Site runoff is to be controlled with erosion, perimeter, sediment, and surface stabilization measures in accordance with local standards and the DEQ Virginia Stormwater Management Handbook, current version.

EROSION AND SEDIMENT CONTROL MEASURES

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed and maintained in accordance with the minimum standards and specifications to the Virginia Stormwater Management Handbook, current version. References to VDOT refer to the Virginia Department of Transportation "Road and Bridge Standards and Specifications," latest edition. A copy of the approved ESC Plan and Narrative and the Virginia Stormwater Management Handbook shall be maintained at the jobsite at all times.

EROSION CONTROL MEASURES

- Temporary Diversion Dike (C-ECM-04):** Temporary ridge of compacted soil constructed to convey clean stormwater runoff through or around disturbed land. Temporary diversion dikes collecting sediment laden runoff work as a conveyance in conjunction with other erosion and sediment control devices.
Sequence of Installation: Prior to any land disturbance.
Removal Event: Following permanent stabilization of the contributing drainage area.
- Temporary Right-of-Way Diversion (C-ECM-04):** Temporary ridge of compacted soil, loose rock, or gravel constructed across disturbed steep slopes and similar sloping areas that is removed following construction once permanent stabilization has begun.
Sequence of Installation: Prior to any land disturbance.
Removal Event: Following permanent stabilization of the contributing drainage area.
- Outlet Protection (C-ECM-15):** Structurally lined aprons or other forms of energy-dissipating devices placed at the outlets of pipes, curb openings, ditch turnouts, or paved channel sections to slow discharge velocity from the outlet to prevent an erosive condition.
Sequence of Installation: Installed prior to conveyance accepting flow.
Removal Event: Permanent practice and shall not to be removed.

PERIMETER CONTROL MEASURES

- Silt Fence (C-PCM-04):** Temporary sediment barrier consisting of a synthetic filter fabric entrenched and stretched across and attached to supporting posts.
Sequence of Installation: Prior to any land disturbance.
Removal Event: Following permanent stabilization of the contributing drainage area.

SEDIMENT CONTROL MEASURES

- Temporary Stone Construction Entrance (C-SCM-03):** A pad with a fabric filter liner underneath the stone located at points of vehicular ingress and egress on a construction site to minimize the amount of sediment, such as dirt or mud, leaving or being tracked from outside the construction site attached to vehicles.
Sequence of Installation: Prior to any land disturbance.
Removal Event: Immediately prior to paving.
- Inlet Protection (C-SCM-04):** Sediment filter or an excavated impoundment around a storm drain inlet or curb inlet or curbs inlets of storm sewers from erosion and sedimentation during construction. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.
Sequence of Installation: Immediately following structure installation or before land disturbance of a contributing drainage are to an existing structure.
Removal Event: Following permanent stabilization of the contributing drainage area.

SURFACE STABILIZATION MEASURES

- Topsoiling (C-SSM-02):** As a BMP, entails preserving and using the surface layer of undisturbed soil, often enriched in organic matter, to obtain a more desirable planting growth medium and enhance final site stabilization.
Sequence of Installation: Following final grading/surface roughening where applicable.
Maintenance: Areas which fail to establish vegetative cover adequate to prevent rill erosion are to be reseeded.
Removal Event: Permanent practice and shall not be removed.
- Surface Roughening (C-SSM-03):** The practice of providing a rough soil surface with horizontal depressions to reduce runoff velocity, increase infiltration, aid the establishment of vegetation, and reduce erosion.
Sequence of Installation: Following grading activities where applicable.
Maintenance: Reseed as needed areas which fail to establish adequate vegetative cover. Fill, regrade, and seed in areas with visible rill erosion.
Removal Event: As needed until final grade is achieved. Permanent practice once final grade is met.
- Soil Stabilization Blankets & Matting (C-SSM-05):** Protective blankets on a prepared planting area of a steep slope, channel, or shoreline.
Sequence of Installation: Following establishment of final grade and placement of lime, fertilizer, and seed.
Removal Event: Not Applicable.
- Temporary Seeding (C-SSM-09):** Establishment of a temporary vegetative cover on disturbed areas by seeding with appropriate rapidly growing annual plants.
Sequence of Installation: Within 7 days of land disturbing activity when cleared areas will not be brought to final grade within 14 days.
Maintenance: Areas which fail to establish vegetative cover adequate to prevent rill erosion are to be reseeded.
Removal Event: As needed for final grading.
- Permanent Seeding (C-SSM-10):** Establishment of a perennial vegetative cover on disturbed areas by planting seed.
Sequence of Installation: Within 7 days of achieving final grade or as noted above.
Maintenance: Areas which fail to establish vegetative cover adequate to prevent rill erosion are to be reseeded, following identification of the cause of poor germination. Contractor is responsible for establishment of permanent seed.
Removal Event: Not Applicable.
- Mulching (C-SSM-11):** Application of a protective blanket of straw or other plan residues/materials to the soil surface during the establishment of temporary and permanent seeding.
Sequence of Installation: Following establishment of final grade and placement of lime, fertilizer, and seed or in areas which cannot be seeded because of the season.
Removal Event: Not Applicable, unless used for temporary cover in areas which cannot be seeded because of the season.

MANAGEMENT STRATEGIES

- The RLD shall amend the SWPP Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters and which has not otherwise been addressed in the plan or if the plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified in the permit, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges from construction activities. Also amend to identify any new contractor that will implement a measure of the plan.
- The RLD shall be responsible for the installation and maintenance of all erosion and sediment control practices maintaining them in good and effective operating condition.
- The RLD shall notify the Architect/Engineer when the local governing official has inspected and approved all in-place erosion and sediment control devices, required by local ordinances to be in place prior to land disturbance.
- Construction shall be sequenced so that the duration of grading operations is as brief as possible.
- Maintenance of inlet and outlet protection shall be given high priority.
- Temporary seeding or other stabilization shall follow within 7 days after grading, or installation if a temporary measure.
- Areas which are not to be disturbed shall be clearly marked by flags, signs, etc.
- No solid materials, including building materials, garbage, and debris shall be discharged to surface waters of the State, except as authorized by a Section 404 permit.
- Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities. The generation of dust shall be minimized.
- Ensure and demonstrate compliance with applicable State and/or local waster disposal, sanitary sewer or septic system regulations.
- All sediment removed from sediment trapping measures or cleaning operations shall be appropriately wasted so as not to become a dust or sediment problem elsewhere.
- After achieving adequate stabilization, the temporary E&S controls will be cleaned up and removed.

MAINTENANCE

The contractor shall inspect all erosion control measures immediately after each run-off producing rainfall event, at least daily during prolonged rainfall, at least weekly when no rainfall occurs, and in accordance with any permit regulations. The following items shall be checked in particular:

- Inlet protection shall be checked regularly for sediment cleanout. Remove sediment prior to it reaching ½ the design depth of the trap.
- Silt fences shall be checked regularly for structural/functional integrity. Remove any sediment deposits – do not allow buildup.
- All seeded areas shall be checked regularly to see that a good stand is maintained. Areas should be fertilized and reseeded as needed.

POTENTIAL POLLUTION SOURCES & STORED MATERIALS

The RLD shall prepare a list of all potential sources of pollution and all construction and waste materials expected to be stored on-site and update as appropriate. Examples would be vehicle fueling area, fuel delivery vehicle, fertilizer, chemicals, temp. sanitary waste facilities, concrete washouts, etc. For each listed item list its location and describe necessary controls to reduce pollutants from these materials including storage practices to minimize exposure to storm water as well as spill prevention and response, schedule of implementation and maintenance necessary for effectiveness.

INSPECTIONS

The RLD shall inspect disturbed areas of the construction site and areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site. The inspections shall be conducted at least once every four (4) days and within forty-eight (48) hours after a rain event greater than 0.25" inches.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. ESC measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.

Based on the results of the inspection, the site description identified in the plan and pollution prevention measures shall be revised as appropriate, within seven (7) calendar days following the inspection. Such modifications shall provide for timely implementation of any changes to the plan within seven (7) calendar days following the inspection and before next anticipated storm event, if practical.

REPORTING

A report summarizing the scope of the inspection, names and qualifications of personnel making the inspection, the date of the inspection, major observations, and actions taken as a result of the inspection

shall be made and retained by the Contractor. Where no incidents of noncompliance are reported, report shall certify that facility is in compliance plans and any permits; keep reports with this narrative. The report shall be certified in accordance with the permit.

STORM WATER MANAGEMENT

All runoff from the site will be released in accordance with current Commonwealth of Virginia Standards and Regulations as set forth in the Virginia Stormwater Management Handbook, current version. Site disturbance is less than 10,000 sf (7,432 sf) and is exempt from the water quality and quantity requirements set forth in 9VAC25-875-590 and 9VAC25-875-600 of the Virginia Stormwater Management Handbook, current version.

UNDERGROUND UTILITY INSTALLATION

Underground utility lines are to be installed with this plan. See Electrical Plan sheets for details.

PROHIBITION OF NON-STORM WATER DISCHARGES

- The following non-storm water discharges are allowed: discharges from fire fighting activities; fire hydrant flushing; waters used to wash vehicles where detergents are not used; water used to control dust; potable water sources including waterline flushing; hydrostatic testing; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated ground water or spring water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.
- Except for allowed discharges listed above, sources of non-storm water that are combined with storm water discharges from the construction site must be identified on the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water components.

CONTRACTORS

Identify for each measure identified in the plan, the Contractor/subcontractor that will implement the measure. All contractors identified above must sign the following certification statement. All certifications must be included in the SWPP Plan.

"I certify under penalty of law that I understand the terms and conditions of this Virginia Pollutant Discharge Elimination System (VPDES) general permit that authorizes the storm water discharges from the construction activity identified as part of this certification."

Name & title of signatory (Responsible Corporate Official, General Partner, or Sole Proprietor)

Name, address & phone of contracting firm

Address of other identifying description of the site

Date certification made

DISPLAY & STATUS OF PLAN

Plan with a copy of the permit must be maintained on-site and kept available for DEQ and City inspectors at all times from the date of commencement of construction to the date of final stabilization. Note that this narrative and RLD's log of inspection reports and all certifications are part of the plan (keep with this narrative).

The Plan with all attachments, reports, etc. shall be retained by the contractor for at least three (3) years from the date that the site is finally stabilized.

SCHEDULE

Record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated.

Perimeter controls shall be installed after clearing and grubbing necessary for installation of the measure, but before the clearing and grubbing for the remaining portions of the site. The perimeter controls shall be actively maintained until final stabilization of those portions of the site upward of the perimeter control. Temporary perimeter controls may be removed after final stabilization.

Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven (7) days after the construction activities have temporarily or permanently ceased, unless construction activity will resume within twenty-one (21) days after ceasing. Permanent seeding shall be done within 30 days if construction has permanently ceased.

Whenever water seeps from a slope face, adequate subsurface interception (french drain) shall be provided discharging to the nearest suitable stabilized channel.

All temporary ESC measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program administrator. Trapped sediment and other disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

NOTICE OF TERMINATION

When the site has been finally stabilized and all the storm water discharges from construction activities that are authorized by the permit are eliminated, the permit holder must submit a Notice of Termination that is certified in accordance with permit. The terms and conditions of the permit shall remain in effect until a completed Notice of Termination is submitted to DEQ. Also, coordinate project close out with City of Roanoke Planning, Building, and Development and utilize the VSMF Project Completion Form.

SPECTRUM DESIGN
architects | engineers

Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011
540.342.6001
SPECTRUMPC.COM



CITY OF ROANOKE
REFUELING CENTERS
FIRE STATION #6

ROANOKE CITY PROJECT NO.: RFP #24-10-66
Spectrum Design Project No.: 23181



PROJ. MGR.: CHECKED BY: DRAWN BY:

SHEET ISSUE DATE:
10.10.2025

PROJECT PHASE:
BID DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

KEY PLAN:

SHEET NAME:
EROSION & SEDIMENT
CONTROL NOTES

SHEET NUMBER:

C205-FS6

City of Roanoke
Planning, Building, & Development

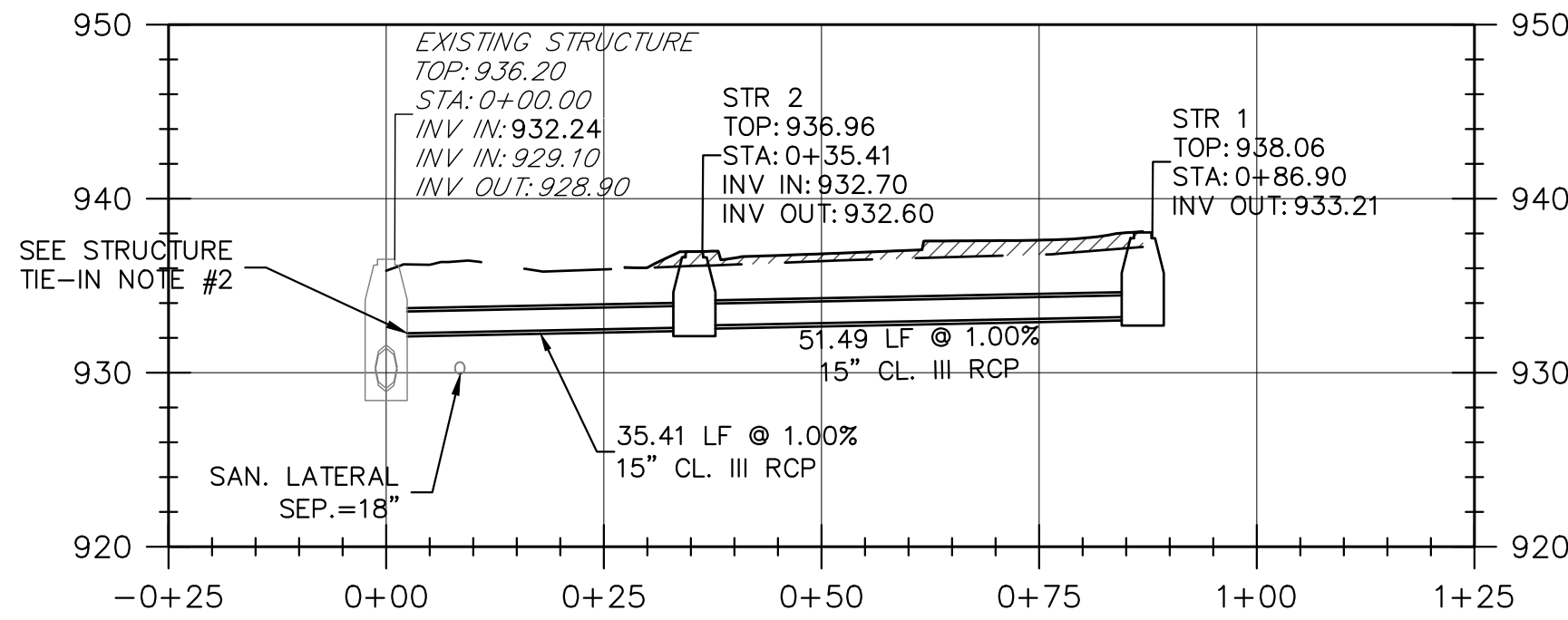
COMPREHENSIVE DEVELOPMENT PLAN

APPROVED

by A.C. Cypher 10/20/2025

AHJ APPROVAL STAMP

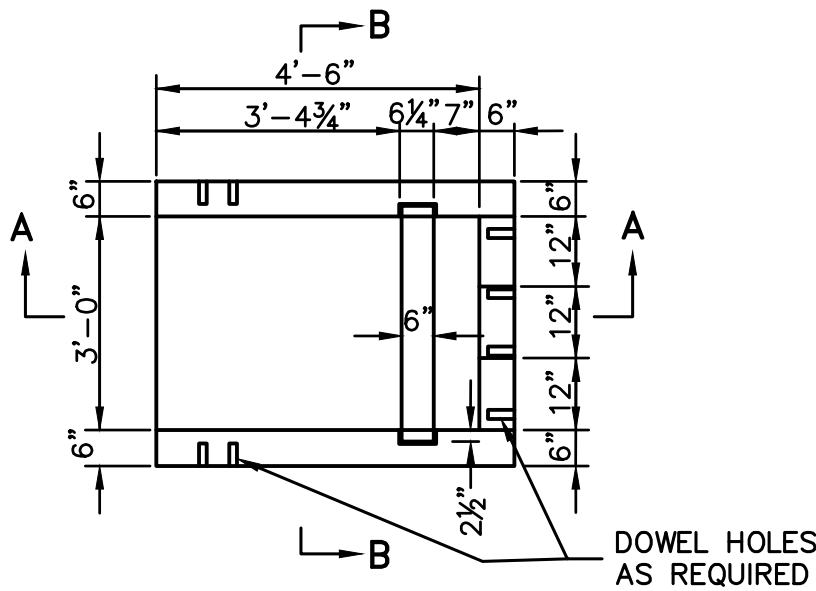
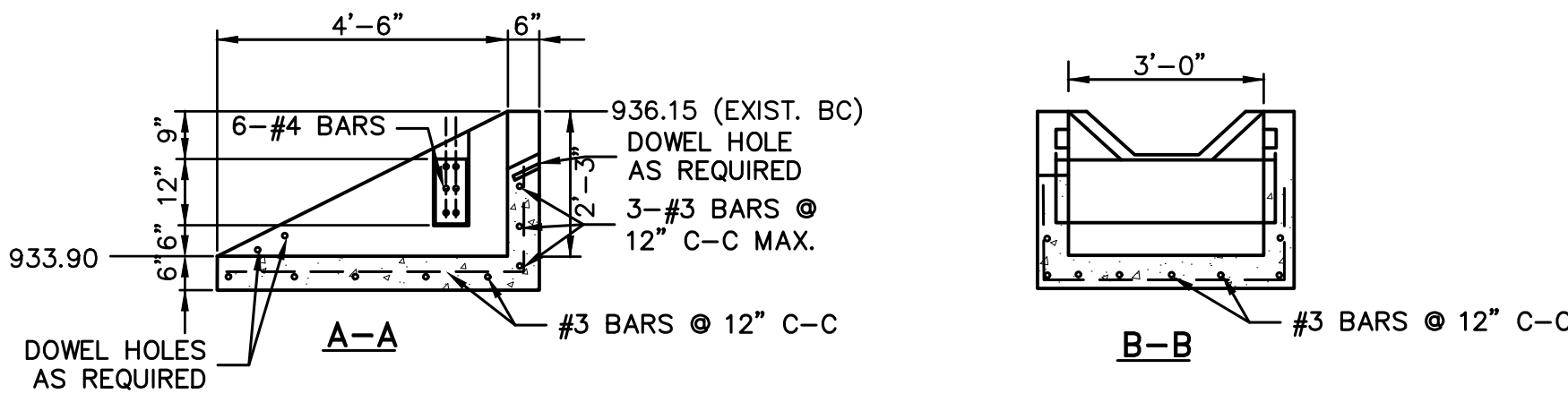
STORM SEWER 'A' PROFILE



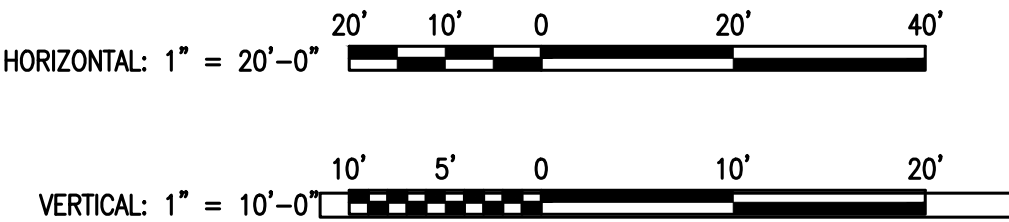
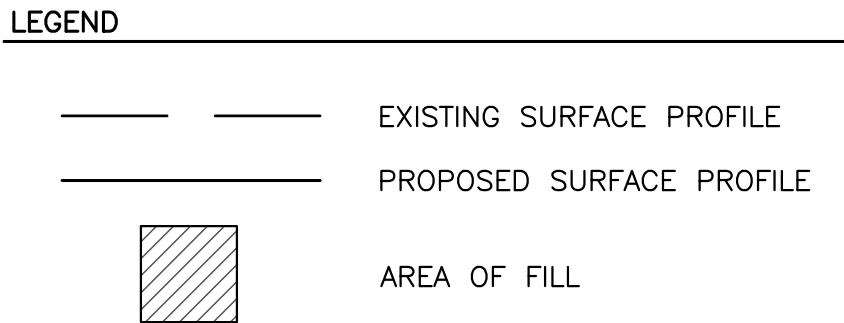
STORM SCHEDULE

- | | | |
|---|---|--|
| 1 | DI-3C, TOP=938.06, H=4.85', L=4'
15" INV. OUT=933.21 | |
| 1 | 2 | 51.49 LF OF 15" CL. III RCP @ 1.00%
INV. UPPER=933.21 INV. LOWER=932.70 |
| 2 | DI-3C, TOP=936.96, H=4.36', L=4'
15" INV. IN=932.70
15" INV. OUT=932.60 | |
| 2 | EX | 35.41 LF OF 15" CL. III RCP @ 1.00%
INV. UPPER=932.60 INV. LOWER=932.24 |

NOTES:
1. PROVIDE INLET SHAPING FOR ALL STRUCTURES. SEE DETAIL 2/C502-FS6.
2. CONNECTION TO THE EXISTING INLET SHALL BE UNDER THE INSPECTION OF THE SWU INSPECTOR. COORDINATE WITH JEFF LANNING, 540-589-5720. ALL PIPE OPENINGS INTO A DRAINAGE STRUCTURE SHALL BE CORED OR FORMED. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ANY TYPE OF IMPACT EQUIPMENT TO CREATE AN OPENING INTO THE DRAINAGE STRUCTURE. THE RESIDUAL OPENING, AFTER INSTALLING THE PIPE, SHALL BE CLOSED AND SEALED ON BOTH SIDES OF THE STRUCTURE WALL WITH MORTAR AND BRICK, AS NEEDED. THE CITY SHALL REJECT CONNECTIONS THAT ARE NOT BONDED OR CONNECTIONS THAT HAVE SHRINKAGE CRACKING.



PRECAST ENERGY DISSIPATOR
NOT TO SCALE



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CITY OF ROANOKE
REFUELING CENTERS
FIRE STATION #6

ROANOKE CITY PROJECT NO.: RFP #24-10-66
Spectrum Design Project No.: 23181



PROJ. MGR.: CHECKED BY: DRAWN BY:
MAR MAR AGA

SHEET ISSUE DATE:
10.10.2025

PROJECT PHASE:
BID DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

KEY PLAN:

SHEET NAME:
STORM SEWER
PROFILES

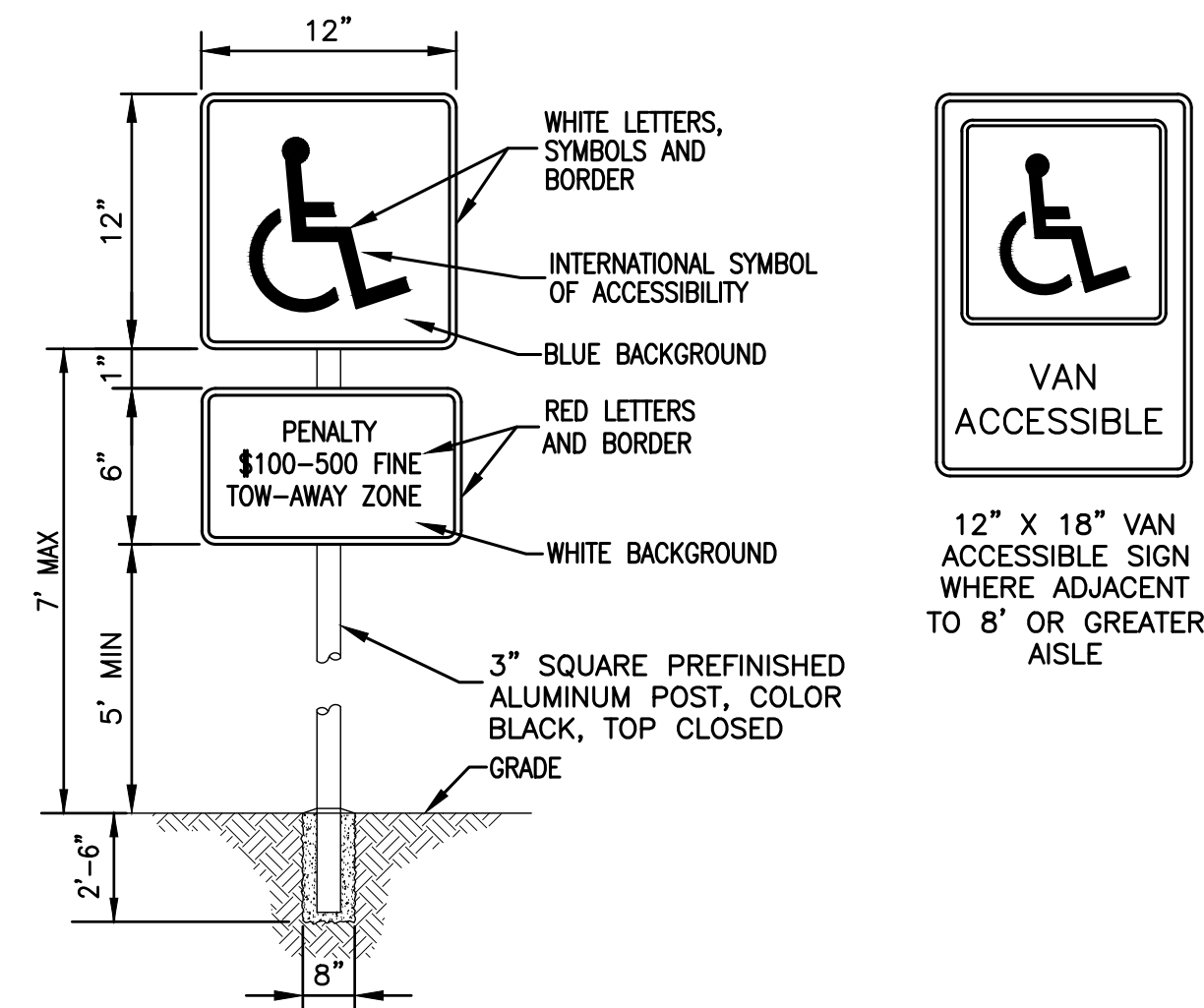
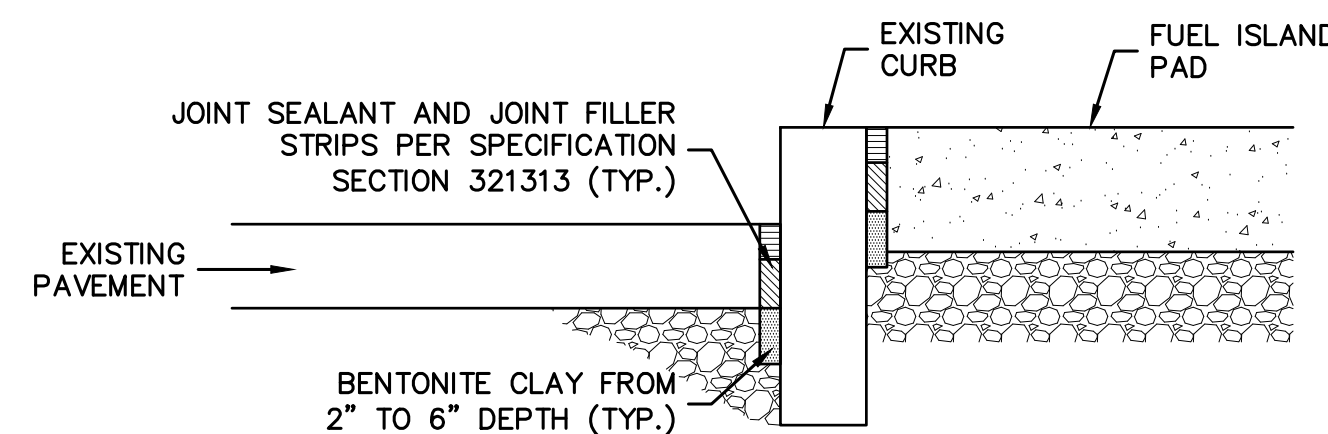
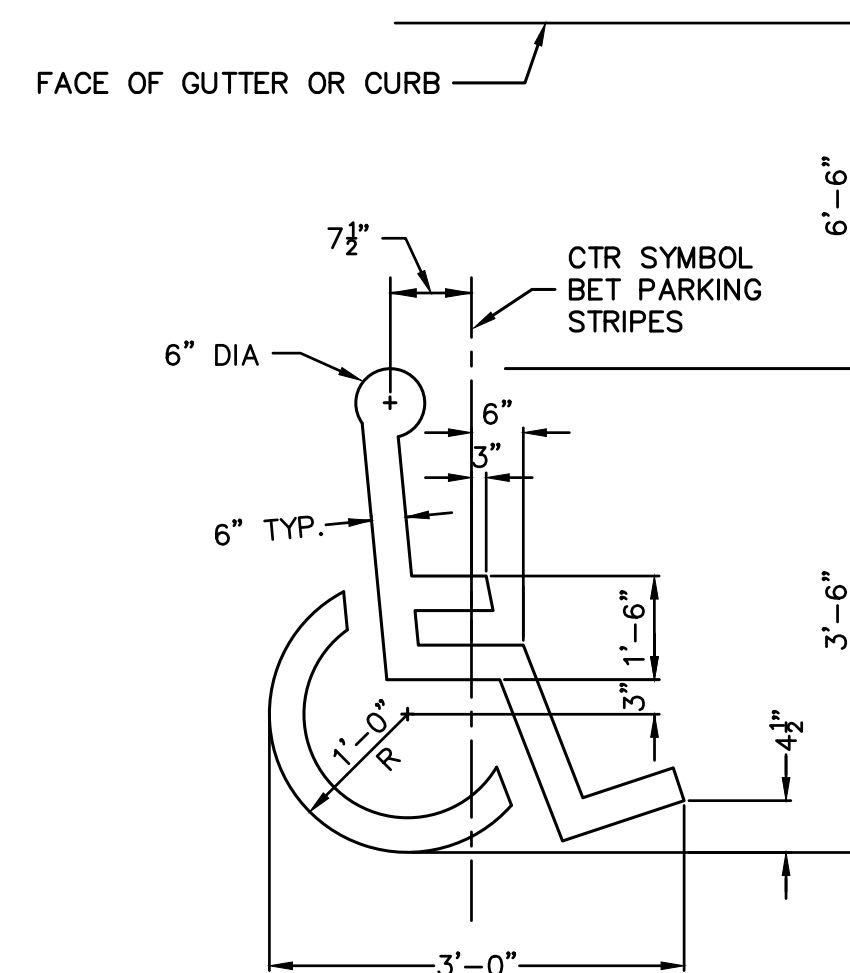
SHEET NUMBER:
C301-FS6

City of Roanoke
Planning, Building, & Development

COMPREHENSIVE DEVELOPMENT PLAN

APPROVED
by A.C. Cypher 10/20/2025

AHJ APPROVAL STAMP

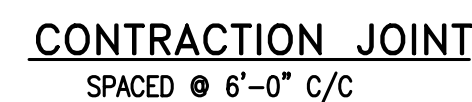


4 H/C VAN ACCESSIBLE PARKING SIGN

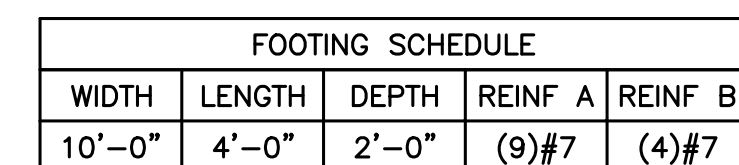
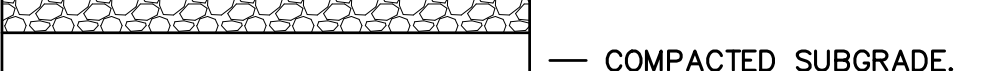
C101 C501 NO SCALE



CG-6 COMBINATION CURB & GUTTER



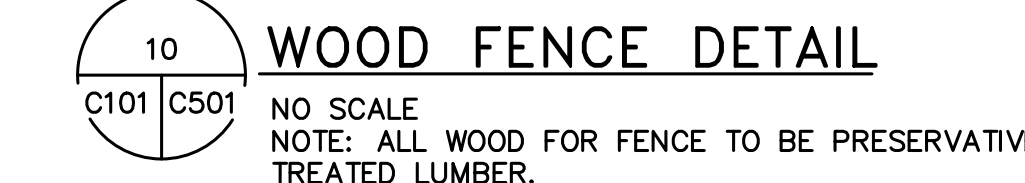
SPACED @ 30'-0" C/C



The drawing consists of two views of a fuel tank saddle. The top view shows a circular cross-section with a central rectangular area labeled 'FUEL TANK SEE PLAN'. The side view shows a cross-section of the saddle, which is 6 inches thick and made of 21A stone. It is reinforced with 2-inch clear reinforcement bars (REINF A) and 3-inch clear reinforcement bars (REINF A). The saddle is anchored to the fuel tank (FTG) by tank mfr. The side view also shows the width and depth of the saddle. A list of notes is provided on the right side of the drawing.

NOTES:

1. REINF A
2. REINF B
3. BOTTOM #
4. TOP BARS



ROANOKE CITY PROJECT NO.: **RFP #24-10-66**
Spectrum Design Project No.: **2318**



SHEET ISSUE DATE
10.10.2025

PROJECT PHASE:
BID DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

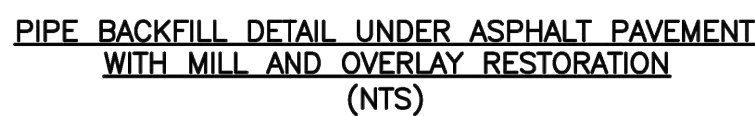
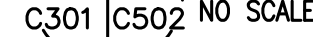
KEY PLANS

SHEET NAME:
SITE DETAILS

SHEET NUMBER:
C501-FS6

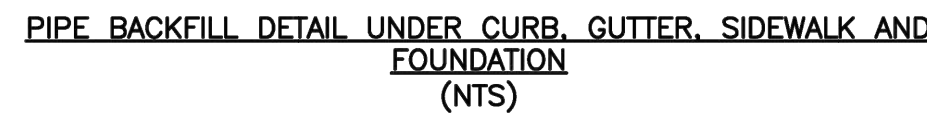
APPROVED
by A.C. Cypher 10/20/2025

AHJ APPROVAL STAMP



1. VDOT 21A SHALL BE COMPACTED TO 95% (ASTM D698).
2. THE BM-25 SHALL BE INSTALLED TO THE TOP OF THE TRENCH AS A TEMPORARY RIDING SURFACE. AS PART OF THE FINAL RESTORATION THE MILL AND OVERLAY OPERATION WILL MILL OFF THE TOP 2" OF BM-25 AND OVERLAY WITH SURFACE MIX.
3. BM-25 SHALL BE INSTALLED IN TWO LIFTS AND COMPACTED TO VDOT RBS.
4. DISPOSAL OF EXCESS EXCAVATED SOIL/MATERIAL AT AN OFF-SITE LOCATION IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS. STOCKPILING ON-SITE SHALL BE LIMITED.
5. IF PIPE IS GREATER THAN OR EQUAL TO 6" IN DIAMETER THEN BEDDING SHALL BE VDOT NO. 57 AGGREGATE. IF PIPE IS LESS THAN 6" IN DIAMETER THEN BEDDING SHALL BE VDOT NO. 10 SCREENINGS COMPACTED TO 95% (ASTM D698).

D1—PIPEBACKFILL.DWG



1. VDOT 21A SHALL BE COMPACTED TO 95% (ASTM D698).
2. THIS DETAIL ALSO APPLIES TO ANY AREA WITHIN 5' OF CURB, GUTTER OR SIDEWALK.
3. DISPOSE OF EXCESS EXCAVATED SOIL/MATERIAL AT AN OFF-SITE LOCATION IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS. STOCKPIILING ON-SITE SHALL BE LIMITED.
4. IF PIPE IS GREATER THAN OR EQUAL TO 6" IN DIAMETER THEN BEDDING SHALL BE VDOT NO. 57 AGGREGATE. IF PIPE IS LESS THAN 6" IN DIAMETER THEN BEDDING SHALL BE VDOT NO. 10 SCREENINGS COMPACTED TO 95% (ASTM D698).

D3-PIPEBACKFILL.DWG

Typical Traffic Control
Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.2)

1. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

Guidance:

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
3. When closing a lane, a PCAMS should be used in advance of the first warning sign if all of the left side signs cannot be installed².
4. Care should be exercised when establishing the limits of the work zone to insure maximum possible sign advance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.
5. All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

Standard:

6. Taper length (L) and channelizing device spacing shall be at the following:

7. Channelizing device spacing shall be at the following:

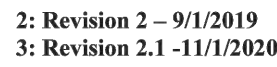
8. An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).
9. The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
10. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.
11. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights but can be used to supplement the amber rotating, flashing, or oscillating lights.
12. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.

Option:²

13. PTRS and their supporting signs may be used, see Sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.²

14. The supplemental PTRS may be eliminated.²

Outside Lane Closure Operation on a Four-Lane Roadway (Figure TTC-16.2)



A. GENERAL

1. THE DESIGN, CONSTRUCTION, QUALITY AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT SHALL CONFORM TO THE FOLLOWING GOVERNING BUILDING CODES, INCLUDING ALL REFERENCED STANDARDS WITHIN:
- A. VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC) - 2021.
- B. INTERNATIONAL BUILDING CODE (IBC) - 2021.
- C. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-22.
2. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND OTHER DISCIPLINE DRAWINGS. THE CONTRACTOR SHALL COORDINATE AND VERIFY THE REQUIREMENTS OF OTHER DISCIPLINES AND TRADES AS TO THE LOCATION, SIZE, AND DIMENSIONS OF ALL ANCHORS, SLEEVES, OPENINGS, CHASES, HANGERS, AND ADDITIONAL ITEMS WITH THE STRUCTURAL WORK. ANY REFERENCE TO ARCHITECTURAL OR OTHER DISCIPLINE MATERIALS, SYSTEMS, OR CONCEPTS IS FOR GENERAL REFERENCE AND CLARITY ONLY.
3. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND MAINTAIN THE STRUCTURE IN PROPER ALIGNMENT UNTIL PERMANENT SUPPORTS AND LATERAL BRACING ARE IN PLACE. THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. OPEN WEB STEEL JOISTS SHOWN ON THE FRAMING PLANS ARE LOCATED SCHEMATICALLY UNLESS SPECIFICALLY DIMENSIONED. ACTUAL LAYOUT SHALL BE SPECIFIED BY THE MANUFACTURER AND COORDINATED BY THE CONTRACTOR. SPACING SHALL NOT EXCEED MAXIMUM INDICATED ON THE STRUCTURAL DRAWINGS. LAYOUTS SHALL BE COORDINATED WITH OTHER TRADES INCLUDING, BUT NOT LIMITED TO: HVAC EQUIPMENT, PIPING, DUCTWORK, AND ARCHITECTURAL PARTITION WALLS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, ETC. NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE STRUCTURE TO THE EXISTING STRUCTURE. THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS NECESSARY FOR PROPER FABRICATION AND ERECTION OF ALL STRUCTURAL MEMBERS.
6. THE STRUCTURAL FRAMING HAS BEEN CONFIGURED AND DESIGNED TO ACCOMMODATE THE MECHANICAL UNITS SPECIFIED IN THE CONTRACTOR DOCUMENTS. THE CONTRACTOR SHALL COORDINATE ALL DIMENSIONS RELATED TO THE MECHANICAL UNITS. IF MECHANICAL UNITS OTHER THAN THOSE SPECIFIED ARE APPROVED AND USED, THE CONTRACTOR SHALL CONTACT THE STRUCTURAL ENGINEER TO REVIEW ALL SUBSTITUTIONS AND MAKE CHANGES TO THE STRUCTURAL FRAMING AS REQUIRED. THE COSTS ASSOCIATED WITH THIS WORK, INCLUDING FEES FOR REVIEW AND REDESIGN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF STRUCTURAL STEEL FRAMING, STEEL JOISTS, STEEL DECK, AND THEIR ASSOCIATED CONNECTIONS THAT REQUIRE SPRAYED ON FIRE PROOFING. THESE ITEMS SHALL NOT BE SHOP OR FIELD PRIMED.
8. THIS PROJECT IS SUBJECT TO VUSBC CHAPTER 17 SPECIAL INSPECTIONS. REFER TO STATEMENT OF SPECIAL INSPECTIONS FOR REQUIREMENTS. OWNER SHALL RETAIN A QUALIFIED TESTING AND INSPECTION AGENCY. CONTRACTOR SHALL COORDINATE TESTING AND INSPECTIONS AND PROVIDE ACCESS TO THE WORK.

B. DESIGN CRITERIA

1. UNLESS NOTED OTHERWISE, ALL DESIGN LOADS ARE BASED ON THE FOLLOWING DATA IN ACCORDANCE WITH THE VUSBC.
2. RISK CATEGORY IV
3. FLOOR LIVE LOADS:
- A. SLABS-ON-GRADE, VEHICLE 250 PSF
- B. AREAS NOT OTHERWISE SPECIFIED 100 PSF
4. FLOOR LIVE LOAD REDUCTIONS ALLOWED PER THE VUSBC HAVE BEEN APPLIED TO THE REACTIONS AND LOADS INDICATED ON THE DRAWINGS. NO FURTHER REDUCTION IS PERMITTED.
5. ROOF LIVE LOAD (UNREDUCIBLE), $L_R = 20$ PSF
6. SNOW LOADS:
- A. GROUND SNOW LOAD, $P_G = 61$ PSF
- B. EXPOSURE FACTOR, $C_E = 1.0$
- C. THERMAL FACTOR, $C_T = 1.2$
- D. FLAT ROOF SNOW LOAD, $P_F = 0.7 \cdot C_E \cdot C_T \cdot P_G = 51.2$ PSF
- E. SNOW LOADS SHALL BE INCREASED FOR PARTIAL LOADING, UNBALANCED, DRIFTING, AND SLIDING CONDITIONS AS REQUIRED BY ASCE 7-22.
7. WIND LOADS:
- A. ULTIMATE DESIGN WIND SPEED $= V_{ULT} = 120$ MPH
- B. NOMINAL DESIGN WIND SPEED $= V_{NOM} = V_{ULT} \cdot 0.775 = 93$ MPH
- C. EXPOSURE CATEGORY B
- D. OPEN, LOW-RISE SIMPLE DIAPHRAGM BUILDING
- E. INTERNAL PRESSURE COEFFICIENT, $G_{CFI} = +/- 0.18$
- F. THE DESIGN WIND PRESSURE FOR EXTERIOR COMPONENTS AND CLADDING SHALL BE DETERMINED IN ACCORDANCE WITH ASCE 7-22.
8. TORNADO LOADS:
- A. EFFECTIVE PLAN AREA, $A_E = 576$ SF
- B. TORNADO WIND SPEED, $V_T = 50$ MPH < 60 MPH. TORNADO LOADS NOT REQUIRED.
9. SEISMIC LOADS:
- A. SEISMIC IMPORTANCE FACTOR, $I_E = 1.5$
- B. MAPPED SPECTRAL RESPONSE ACCELERATIONS
- a. $S_S = 0.22$
- b. $S_1 = 0.068$
- C. SITE CLASS D
- D. SPECTRAL RESPONSE COEFFICIENTS
- a. $S_{DS} = 0.18$
- b. $S_{D1} = 0.097$
- E. SEISMIC DESIGN CATEGORY C
- F. BASIC SEISMIC-FORCE RESISTING SYSTEM:
- a. STEEL SYSTEMS NOT SPECIFICALLY DESIGNED FOR SEISMIC RESISTANCE, $R = 3.0$.
- G. SEISMIC RESPONSE COEFFICIENT, $C_s = 0.09$
- H. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

C. FOUNDATIONS AND BUILDING EARTHWORK

1. ALL BUILDING PAD EARTHWORK AND FOUNDATION CONSTRUCTION SHALL CONFORM TO THE FOLLOW:
- A. DIVISION 31 SPECIFICATIONS
- B. "REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION" PREPARED BY FROEHLING & ROBERTSON, DATED JANUARY 16, 2025. THE RECOMMENDATIONS OF THIS REPORT ARE HEREIN MADE A PART OF THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS. THE ALLOWABLE DESIGN SOIL BEARING PRESSURE SHALL BE 2,500 PSF.
2. THE OWNER SHALL RETAIN A TESTING AGENCY STAFFED WITH A QUALIFIED GEOTECHNICAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA TO INSPECT AND APPROVE THE SUBGRADE INCLUDING FILL AND BACKFILL MATERIALS AND OPERATIONS.
3. ALL FILL AND BACKFILL MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND APPROVED BY THE GEOTECHNICAL ENGINEER. ALL FILL AND BACKFILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS AND COMPACTED TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR (ASTM D-698).
4. ALL PIERS AND FOOTINGS ARE LOCATED ON COLUMN CENTERLINES OR GRID LINES UNLESS NOTED OTHERWISE.
5. FOUNDATION WALLS OR GRADE BEAMS HAVING EARTH PLACED ON EACH SIDE SHALL HAVE BOTH SIDES BACKFILLED SIMULTANEOUSLY. NO UNBALANCED FILL OR BACKFILL SHALL BE PLACED AGAINST BASEMENT WALLS UNLESS THE WALLS ARE BRACED EITHER BY TEMPORARY BRACING OR BY PERMANENT FLOOR CONSTRUCTION INCLUDING BASEMENT SLABS-ON-GRADE WHERE APPLICABLE.
6. NO FOUNDATION CONCRETE SHALL BE INSTALLED UNTIL ALL FOUNDATION WORK HAS BEEN COORDINATED WITH UNDERGROUND UTILITIES. FOOTINGS SHALL BE LOWERED WHERE REQUIRED TO AVOID UTILITIES. PROVIDE SLEEVES THROUGH FOUNDATION WALLS THAT ALLOW A MINIMUM OF 1" CLEAR AROUND THE PIPE OR CONDUIT.

CAST-IN-PLACE CONCRETE

1. ALL CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO THE FOLLOWING:

- A. ACI 318-19 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."
- B. ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE."
- C. CRSI "MANUAL OF STANDARD PRACTICE"
- D. DIVISION 3 SPECIFICATIONS

2. MATERIALS

- A. REINFORCING STEEL: ASTM A615, GRADE 60
- B. WELDED WIRE FABRIC (WWF): ASTM A185, $F_y = 65$ KSI

3. PROVIDE THE FOLLOWING CONCRETE MIXES FOR THE STRUCTURES INDICATED WITH THE 28-DAY COMPRESSIVE STRENGTH (f'_c) AND ENTRAINED AREA SPECIFIED. ALL MIXES SHALL BE NORMAL WEIGHT.

USE	f'_c	ENTRAINED AIR
FOOTINGS	4000 PSI	6% +/- 1.5%

4. DO NOT PROVIDE AIR ENTRAINING ADMIXTURES IN MIXES FOR INTERIOR SLABS-ON-GRADE OR SLABS ON STEEL DECK.

5. REFER TO CIVIL FOR EXTERIOR CONCRETE PAVEMENT.

6. PROVIDE WELDED WIRE FABRIC IN SHEETS. ROLLS WILL NOT BE ACCEPTED.

7. FIELD BENDING OF CONCRETE REINFORCING STEEL IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

8. UNLESS NOTED OTHERWISE, CLEAR CONCRETE COVER OVER REINFORCING SHALL BE:

UNFORMED SURFACES CAST AGAINST EARTH:	3"
EXTERIOR FORMED SURFACES:	2"
INTERIOR FORMED SURFACES:	1-1/2"

9. CONTINUOUS REINFORCING IN WALLS AND SLABS MAY BE SPLICED, AS REQUIRED, PROVIDING BARS ARE OF THE LONGEST PRACTICAL LENGTH AND ALL SPLICES ARE SHOWN ON THE SHOP DRAWINGS. WHEREVER POSSIBLE, SPLICES SHALL BE STAGGERED. UNLESS NOTED OTHERWISE, PROVIDE CONTACT TENSION LAP SPLICES PER THE FOLLOWING SCHEDULE.

BAR SIZE	LAP SPLICE (IN)	
	TOP	OTHER
#3	24	19
#4	32	25
#5	40	31
#6	48	37
#7	70	54
#8	80	62
#9	91	70

10. UNLESS OTHERWISE NOTED OR SHOWN, PROVIDE DOWELS WITH ACI STANDARD 90 DEG HOOKS IN FOOTINGS TO MATCH REINFORCEMENT IN WALL, PIERS, AND COLUMNS. PROVIDE LAP SPLICES WITH VERTICAL AS SCHEDULED.

11. SEE ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATIONS OF PENETRATIONS AND EMBEDDED ITEMS. PROVIDE SLEEVES TO ALLOW DIFFERENTIAL SETTLEMENT BETWEEN THE FOUNDATION WALL AND THE PENETRATION CONDUIT. COORDINATE PENETRATIONS AND EMBEDDED ITEMS WITH REINFORCING. SLIGHTLY SPREAD REINFORCEMENT WHERE POSSIBLE. REFER TO TYPICAL DETAILS WHERE REINFORCING MUST BE CUT.

12. REFER TO AND COORDINATE WITH OTHER DISCIPLINE DRAWINGS FOR ITEMS TO BE INCORPORATED IN THE CONCRETE WORK INCLUDING, BUT NOT LIMITED TO FLOOR DRAINS, CONDUIT, PIPE SLEEVES, FLOOR OUTLETS, ANCHOR BOLTS, ETC.

13. BASE PLATES, ANCHOR BOLTS, SUPPORT ANGLES AND OTHER STEEL EXPOSED TO EARTH OR GRANULAR FILL SHALL BE COVERED WITH A MINIMUM OF 3 INCHES OF CONCRETE.

14. UNLESS OTHERWISE SHOWN ON THE ARCHITECTURAL DRAWINGS, PROVIDE 3/4" CHAMFERS AT ALL CONCRETE EDGES THAT ARE EXPOSED TO VIEW IN THE FINISHED CONDITION.

15. SLOPE SLABS-ON-GRADE AND SLABS ON STEEL DECK AS INDICATED ON THE STRUCTURAL AND / OR THE ARCHITECTURAL DRAWINGS. COORDINATE SLAB-ON-GRADE DEPRESSIONS WITH FINISH FLOOR MATERIALS, ENTRANCE MATS, AND OTHER ITEMS. REFER TO TYPICAL DETAILS.

STRUCTURAL ABBREVIATIONS

AR	ANCHOR ROD
BRG	BEARING
B/ BOT	BOTTOM
B.O.	BOTTOM OF
BTWN	BETWEEN
CLR	CLEAR
CL	CENTER LINE
COL	COLUMN
CMU	CONCRETE MASONRY UNIT
CONT	CONTINUOUS
CJ	CONSTRUCTION OR CONTROL JOINT
DIA	DIAMETER
ELEV	ELEVATION
EMB	EMBEDMENT
EXIST. (E)	EXISTING
EW	EACH WAY
EF	EACH FACE
EJ	EXPANSION JOINT
FTG	FOOTING
FNDN	FOUNDATION
F.O.	FACE OF
FS	FOOTING STEP
GA	GAGE
GALV	GALVANIZED
HP	HIGH POINT
ID	INSIDE DIAMETER
I.F.O.	INSIDE FACE OF
K	KIPS (KILOPOUNDS)
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
NS	NEAR SIDE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO. #	NUMBER
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
O.F.O.	OUTSIDE FACE OF
OPNG	OPENING
OPP	OPPOSITE
PL	PLATE
PT	PRESERVATIVE TREATED
R	RADIUS
REINF	REINFORCEMENT
REQ'D	REQUIRED
SPEC	SPECIFICATION
SIM	SIMILAR
T/	TOP
T.O.	TOP OF
T.O.S.	TOP OF STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
WWF	WELDED WIRE FABRIC
WI	WITH
WP	WORK POINT

LEGENDS

MATERIAL LEGEND

	STEEL		CONCRETE
	CONCRETE MASONRY		GRANULAR FILL
	BRICK		SAND, GROUT
	EARTH		

SYMBOL LEGEND

	SECTION NUMBER
	BUILDING AND WALL SECTION TAG
	DETAIL NUMBER
	DETAIL SECTION TAG
	COLUMN GRID LINE
	NORTH DIRECTION
	SPOT ELEVATION
	BENCHMARK ELEVATION
	DESIGNATOR

SPECTRUM DESIGN
architects | engineers

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CITY OF ROANOKE
REFUELING CENTERS
FIRE STATION #6

ROANOKE CITY PROJECT NO.: RFP #24-10-66
SPECTRUM DESIGN PROJECT NO.: 23181



PROJ. MGR.: CHECKED BY: DRAWN BY:
MAR JM HFR

SHEET ISSUE DATE:
06.19.2025

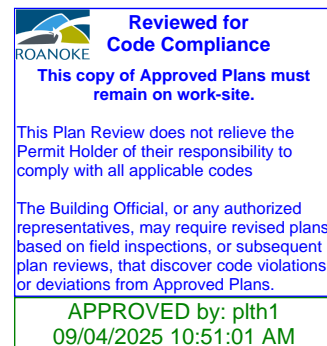
PROJECT PHASE:
CONSTRUCTION DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

SHEET REVISIONS:
REV 1 08.21.2025 CBLD REVIEW 1

SHEET NAME:
GENERAL NOTES

SHEET NUMBER:
S001-FS6

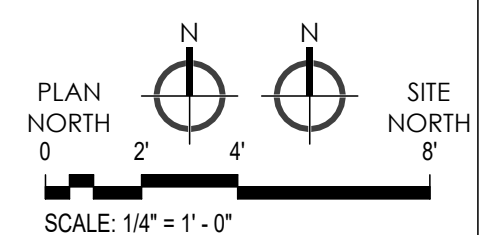
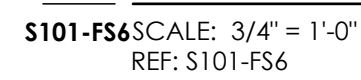
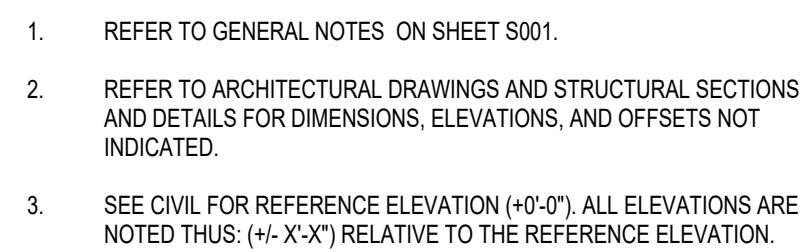


AHJ APPROVAL STAMP

COMMONWEALTH OF VIRGINIA
Jacqueline Mayrosh
 JACQUELINE MAYROSH
 Lic. No. 43345
 06.19.2025
 PROFESSIONAL ENGINEER

SHEET REVISIONS:
REV 1 08.21.2025 CBLD REVIEW 1

AHJ APPROVAL STAMP



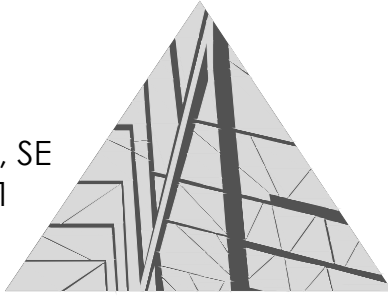
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EQUIPMENT SPECIFICATIONS: ITEMS AND QUANTITIES LISTED BELOW ARE INTENDED TO BE A BASIS OF DESIGN, BUT NOT INCLUSIVE OF ALL COMPONENTS REQUIRED FOR A FUNCTIONING, CODE COMPLIANT, SYSTEM, UNLESS NOTED AS OWNER FURNISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING ALL QUANTITIES AND COMPONENTS REQUIRED FOR A FUNCTIONING, CODE COMPLIANT SYSTEM THAT ARE NOT LISTED BELOW. SUBSTITUTIONS ALLOWED PER SPECIFICATION DIV 01.

QTY.	PART #	DESCRIPTION	OWNER FURNISHED/CONTRACTOR INSTALLED	OWNER FURNISHED/OWNER INSTALLED*
DISPENSERS				
DEF				
1	2335101862	ROTH 275 GALLON DOUBLE--WALL DEF STORAGE TANK EQUIPPED WITH 120V DEF PUMP SYSTEM, 35' DEF HOSE REEL, DEF NOZZLE, 4PIN COUPLERS, CUSTOM DIP TUBE, ROTH TANK GAUGE, LOCKABLE FILL CAP, AND ROTH TANK REEL BRACKET.	X	
DIESEL/GASOLINE				
1	9853GXTW2DF	MASTER: TWO PRODUCT STANDARD FLOW GASBOY ATLASX PRIME DISPENSER WITH FRONT NOZZLE, (1) SINGLE SIDE PRIME OPTION (Z-ATO-PRME01), (1) INTERNAL DISPENSER CONTROLLER (Z-ATO-INDSPC), (1) CATLOW 3/4" X 15' COMPLETE HOSE ASSEMBLY (Z-HHC-HAG809: FOR GASOLINE), (1) CATLOW 3/4" X 15' COMPLETE HOSE ASSEMBLY (Z-HHC-HAD810: FOR DIESEL). CITY OF ROANOKE DESIRES USE OF DEDICATED FUEL MAGNETIC STRIPE CARDS AND KEY FOBs FOR AUTHORIZATION.	X	
1	--	2500 GALLON DIESEL FUEL		X
1	--	2500 GALLON GASOLINE		X
1	A0718	FULLY CONTAINED, LEAK--PROOF ABOVE GROUND STAINLESS STEEL DISPENSER SUMP		
FUEL MANAGEMENT SYSTEMS				
1	TLS--450PLUS	AUTOMATIC TANK GAUGE	X	
1	0881115--880	880 US RADAR LEVEL SENSOR CAT-M1 VEEDER--ROOT 1NCE (TO BE INSTALLED WITH DEF TANK)	X	
1	HYDRX	HYDRX FUEL CONDITIONING SYSTEM	X	
2	RED JACKET	2 HP SUBMERSIBLE TURBINE PUMP		
TANKS				
1	--	2,500 GALLON UL--2085 FIREGUARD HORIZONTAL DOUBLE BULKHEAD TANK		
MONITORING SYSTEMS				
	TBD			
ISLAND EQUIPMENT				
1		HEAVY DUTY, BRIGHT YELLOW, WEATHER RESISTANT STORAGE BIN FOR SPILL RESPONSE WITH HINGED LID CAPABLE OF STORING (10) BAGS OF GRANULAR OIL/FUEL ABSORBENT		
EQUIPMENT				
	FEC	FIRE EXTINGUISHER (2A20BC) AND CABINET		

SPECTRUM DESIGN
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CITY OF ROANOKE
REFUELING CENTERS
FIRE STATION #6

ROANOKE CITY PROJECT NO.: RFP #24-10-66
Spectrum Design Project No.: 23181



PROJ. MGR.:
MAR

CHECKED BY:
MAR

DRAWN BY:
AGA

SHEET ISSUE DATE:
06.19.2025

PROJECT PHASE:
CONSTRUCTION DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

SHEET REVISIONS:
REV 1 08.21.2025 CBLD REVIEW 1

KEY PLAN:

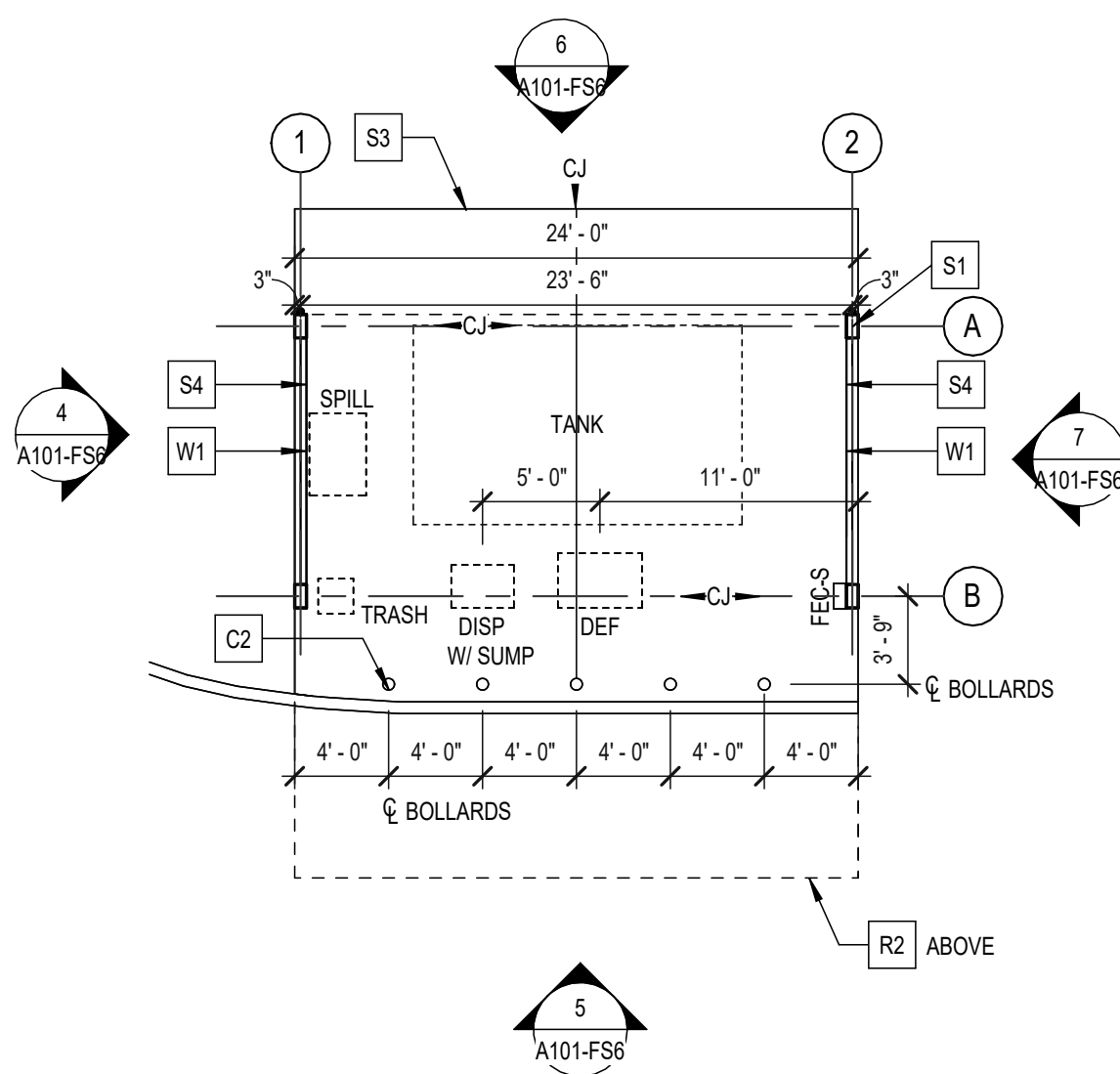
SHEET NAME:
NOTES &
SPECIFICATIONS

SHEET NUMBER:
A001-FS6



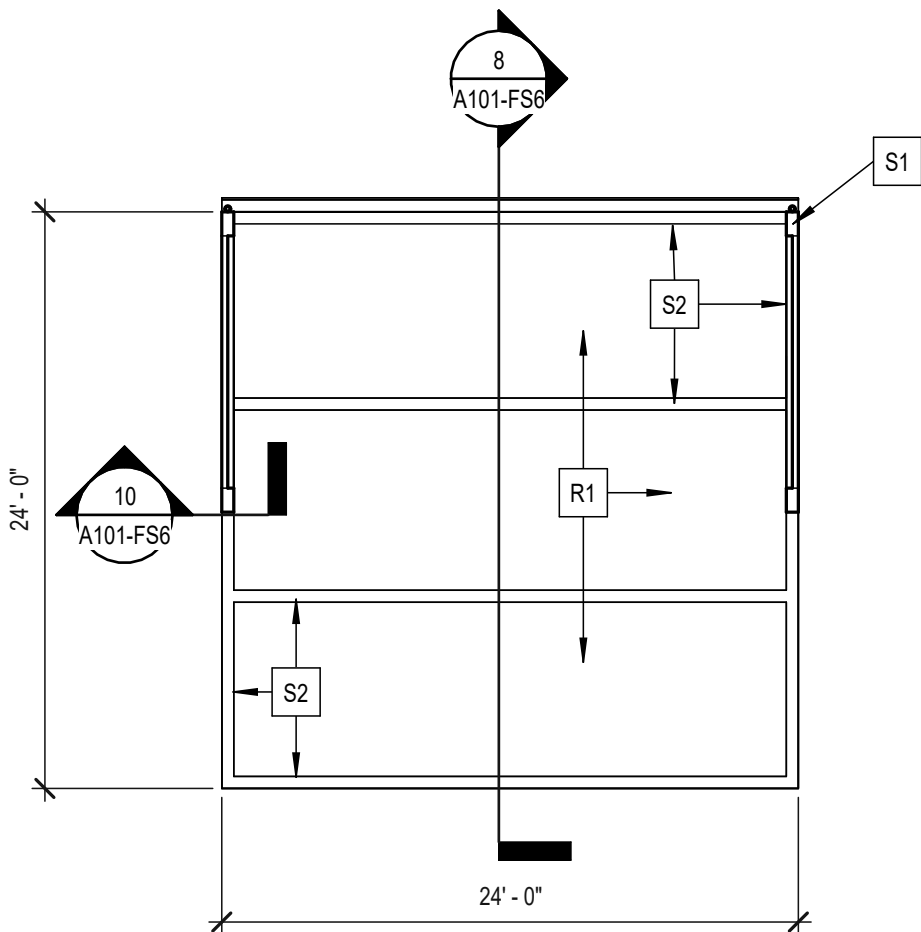
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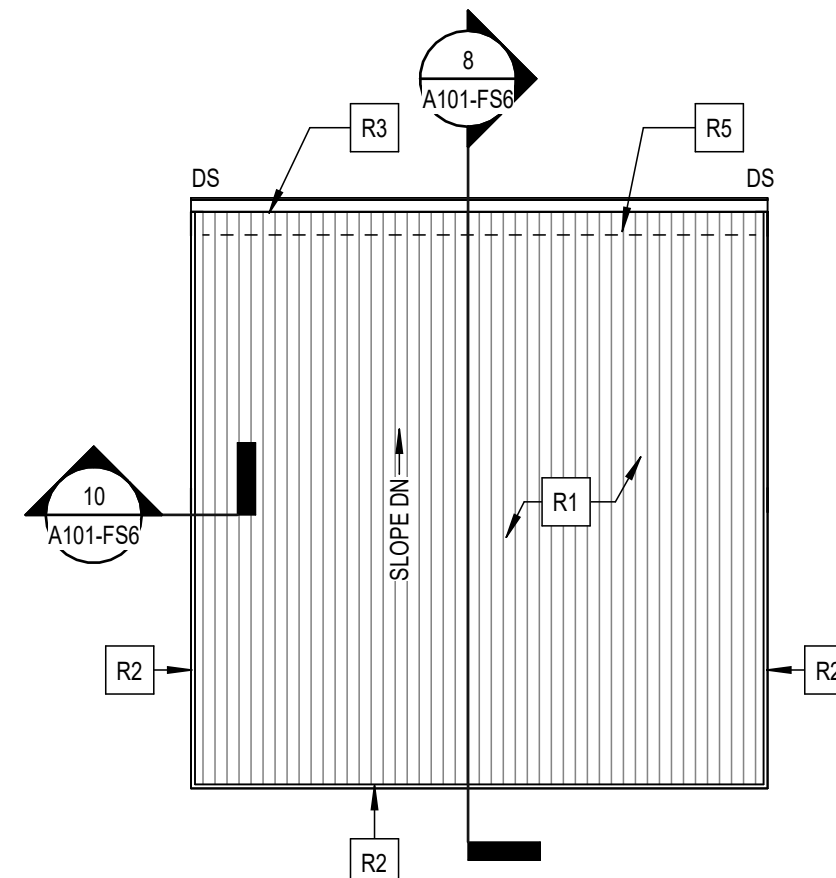
1 FLOOR PLAN

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REF: A101-FS6



2 REFLECTED CEILING PLAN

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REF: A101-FS6



3 ROOF PLAN

A101-FS6 SCALE: 1/8" = 1'-0"
REF: A101-FS6

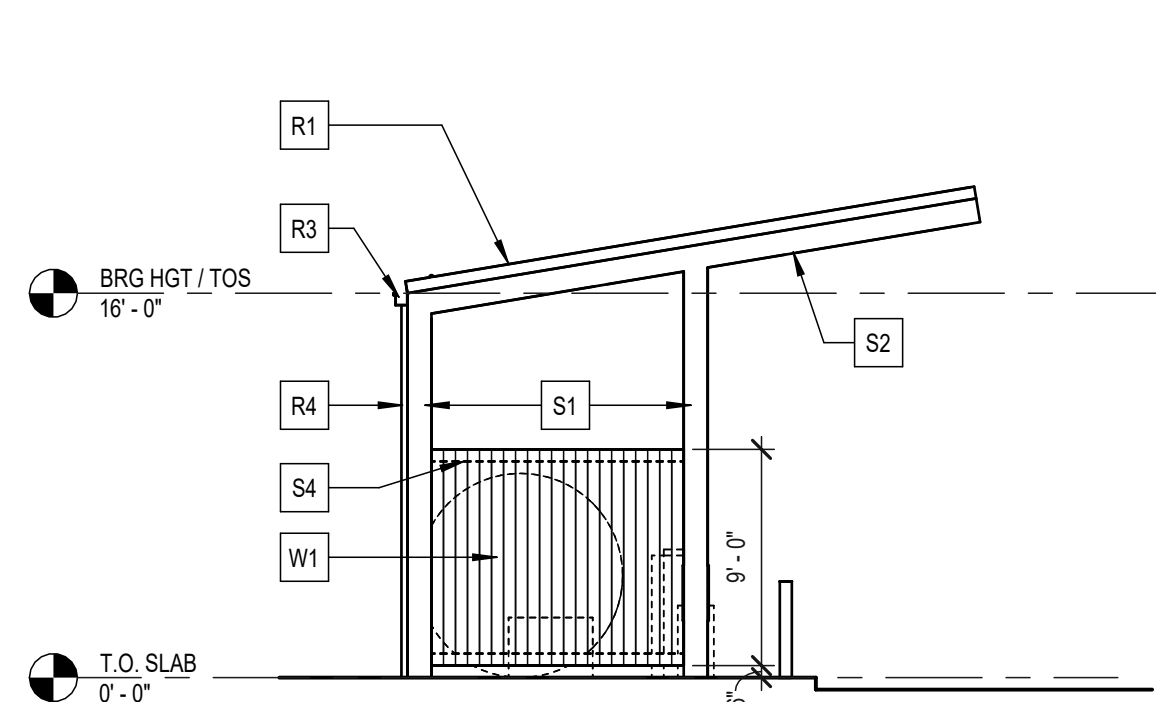
GENERAL NOTES

- GN-1: DIMENSION GUIDELINES:
- NEW CONSTRUCTION = PLAN DIMENSIONS ARE TO FACE OF FRAMING MEMBERS AT GWB, FACE OF MASONRY, AND CENTERLINE OF STRUCTURAL GRID U.N.O.
 - EXISTING CONSTRUCTION = PLAN DIMENSIONS ARE TO FACE OF FINISH OF EXISTING WALLS TO REMAIN U.N.O.
 - PLUMBING FIXTURES = PLAN DIMENSIONS ARE FROM FACE OF FINISH (GWB, TILE, ETC.) TO CENTERLINE OF FIXTURE.
 - *"CLEAR" = DIMENSIONS ARE TO FACE OF FINISH (GWB, TILE, ETC.)

SHEET KEYNOTES

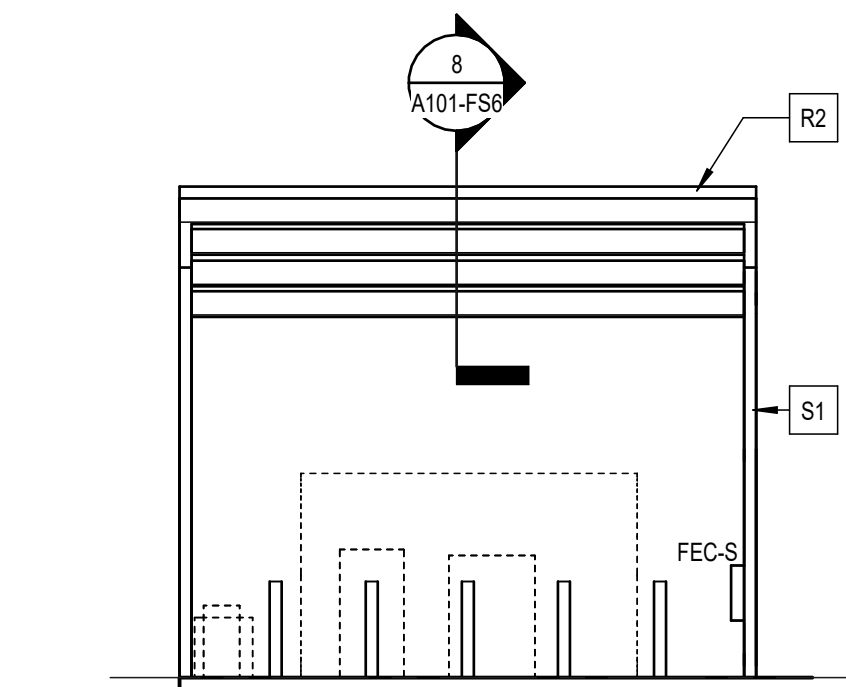
- C2 BOLLARD - SEE CIVIL (TYP. OF 5)
- R1 PREFINISHED METAL ROOF DECK BY CANOPY MANUFACTURER. BASIS OF DESIGN = "FS SERIES" BY PEACHTREE PROTECTIVE COVERS
- R2 PREFINISHED METAL ROOF FASCIA BY CANOPY MANUFACTURER
- R3 PREFINISHED METAL GUTTER W/ GUTTER GUARD
- R4 PREFINISHED METAL DOWNSPOUT - SEE CIVIL FOR TIE IN TO UNDERGROUND CONNECTION
- R5 ONE ROW SNOW GUARDS - NON PENETRATING, STANDING SEAM CLAMPING, CONTINUOUS BAR, S-5 COLORGARD 2.0 SNOW SYSTEM OR APPROVED EQUAL
- S1 METAL COLUMN BY CANOPY MANUFACTURER.
- S2 METAL BEAM BY CANOPY MANUFACTURER.
- S3 CONCRETE SLAB - SEE CIVIL
- S4 HIGH AND LOW METAL BEAM BY CANOPY MANUFACTURER TO SUPPORT ROOF DECK PANEL USED AS WALL SCREEN.
- W1 PREFINISHED METAL DECK PANEL BY CANOPY MANUFACTURER. INSTALL VERTICALLY TO PROVIDE VISUAL SCREEN. BASIS OF DESIGN = "300 SERIES" DECK BY PEACHTREE PROTECTIVE COVERS

Manufacturer canopy plans must be submitted for review and approval prior to install.



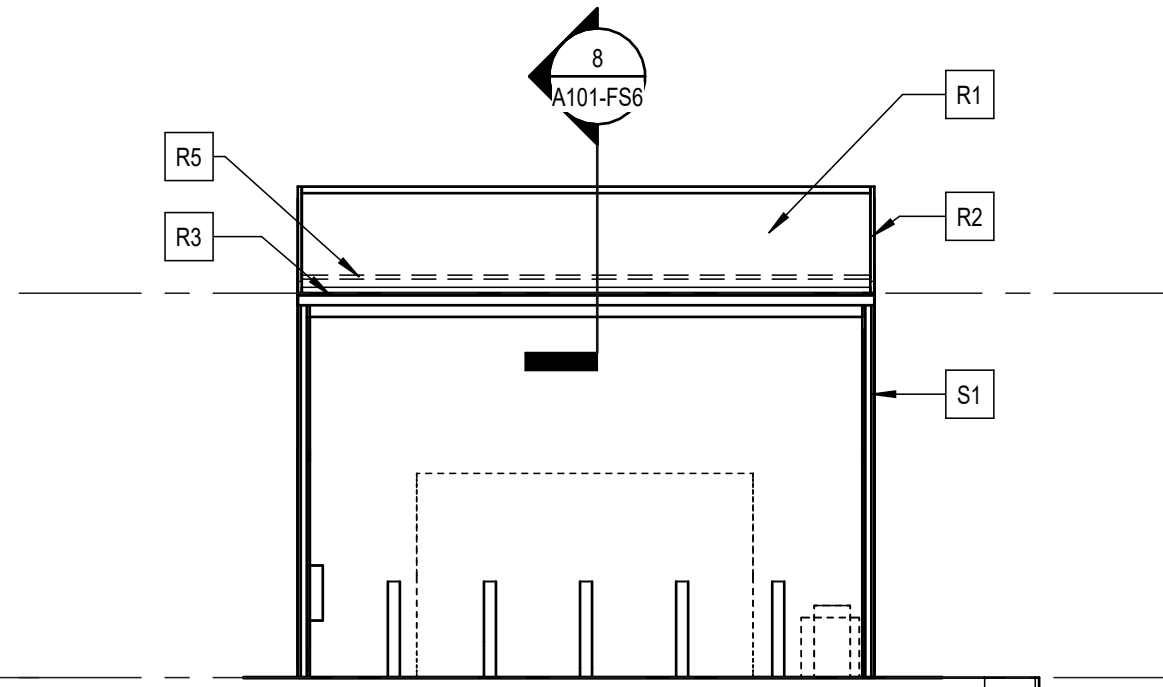
4 LEFT ELEVATION

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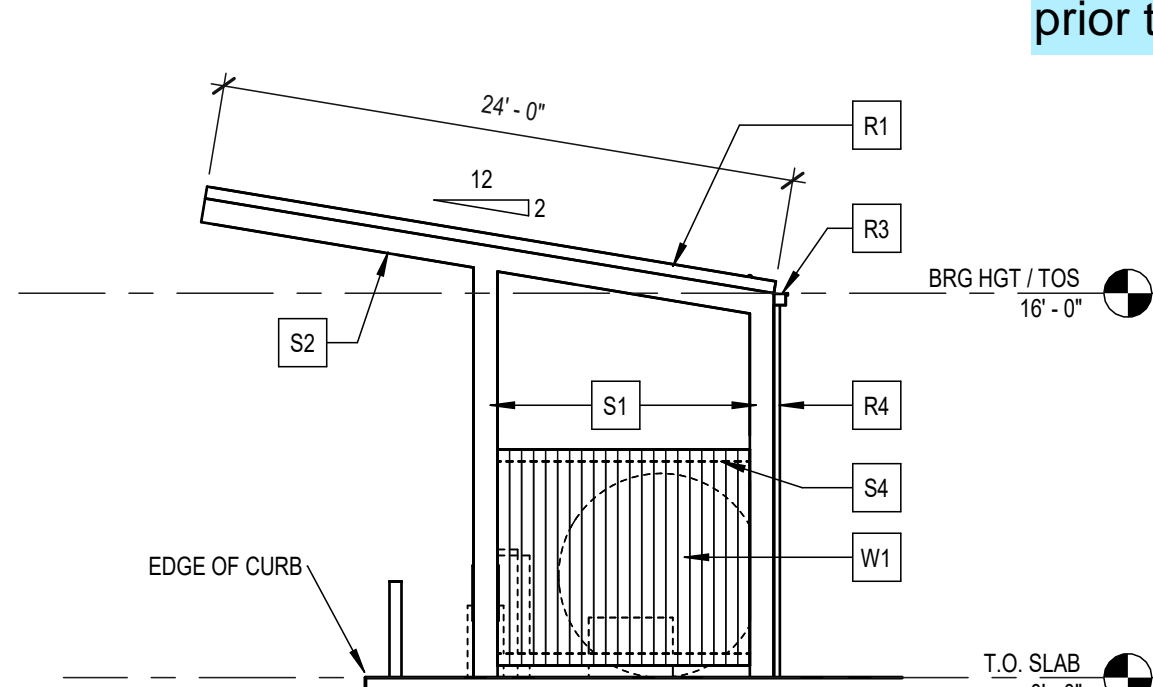
5 FRONT ELEVATION

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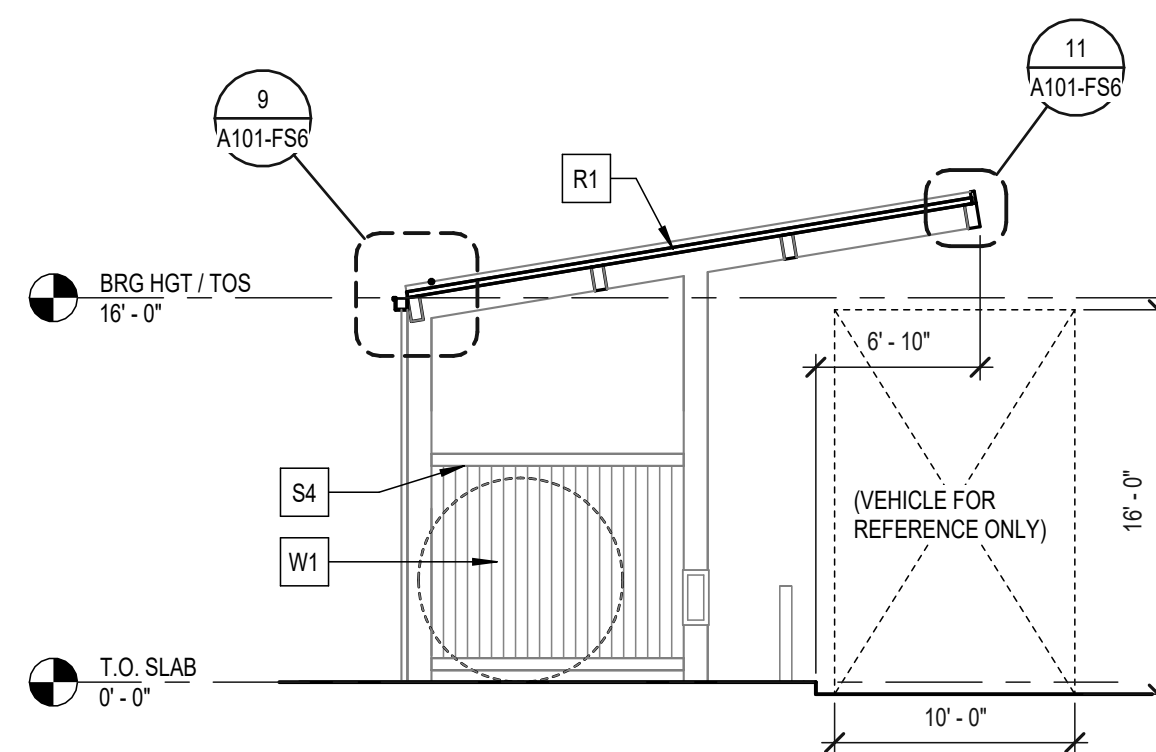
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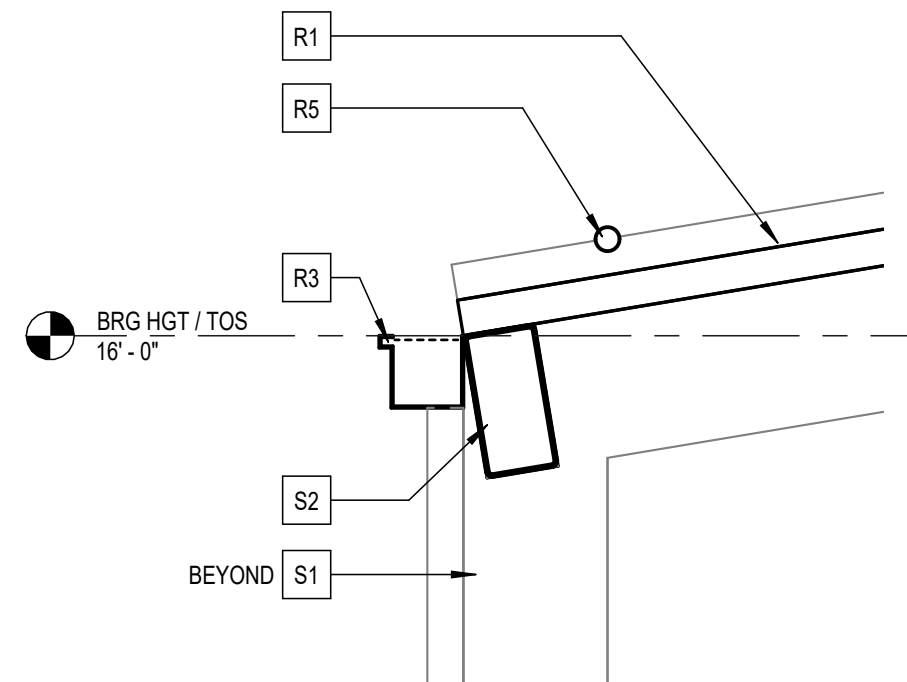
7 RIGHT ELEVATION

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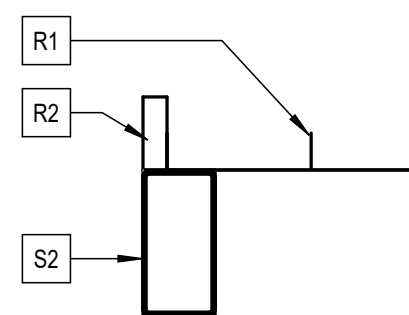
8 SECTION

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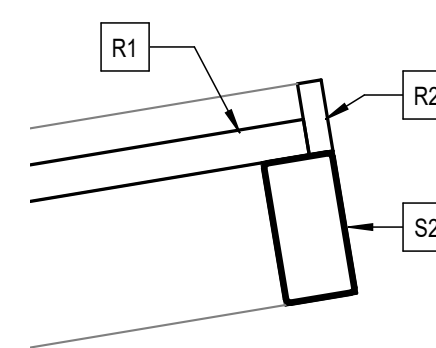
9 EAVE DETAIL

A101-FS6 SCALE: 3/4" = 1'-0"
REF: A101-FS6



10 RAKE DETAIL

A101-FS6 SCALE: 3/4" = 1'-0"
REF: A101-FS6



11 RIDGE DETAIL

A101-FS6 SCALE: 3/4" = 1'-0"
REF: A101-FS6

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

SPECTRUM DESIGN
architects | engineers

Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011
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SPECTRUMPC.COM



CITY OF ROANOKE
REFUELING CENTERS
FIRE STATION #6

ROANOKE CITY PROJECT NO.: RFP #24-10-66
SPECTRUM DESIGN PROJECT NO.: 23181



PROJ. MGR.: MAR
CHECKED BY: DCV
DRAWN BY: TLR

SHEET ISSUE DATE:
06.19.2025

PROJECT PHASE:
CONSTRUCTION DOCUMENTS

SCALE:
AS SHOWN
24"x36" SHEET

SHEET REVISIONS:
REV 1 08.21.2025 CBLD REVIEW 1

SHEET NAME:
PLAN, SECTIONS,
ELEVATIONS, DETAILS

SHEET NUMBER:
A101-FS6



GENERAL NOTES:

- SEE SHEET E001-FS6 FOR LEGEND AND GENERAL NOTES.
- SEE SHEET E501-FS6 FOR ELECTRICAL DETAILS.

SHEET NOTES:

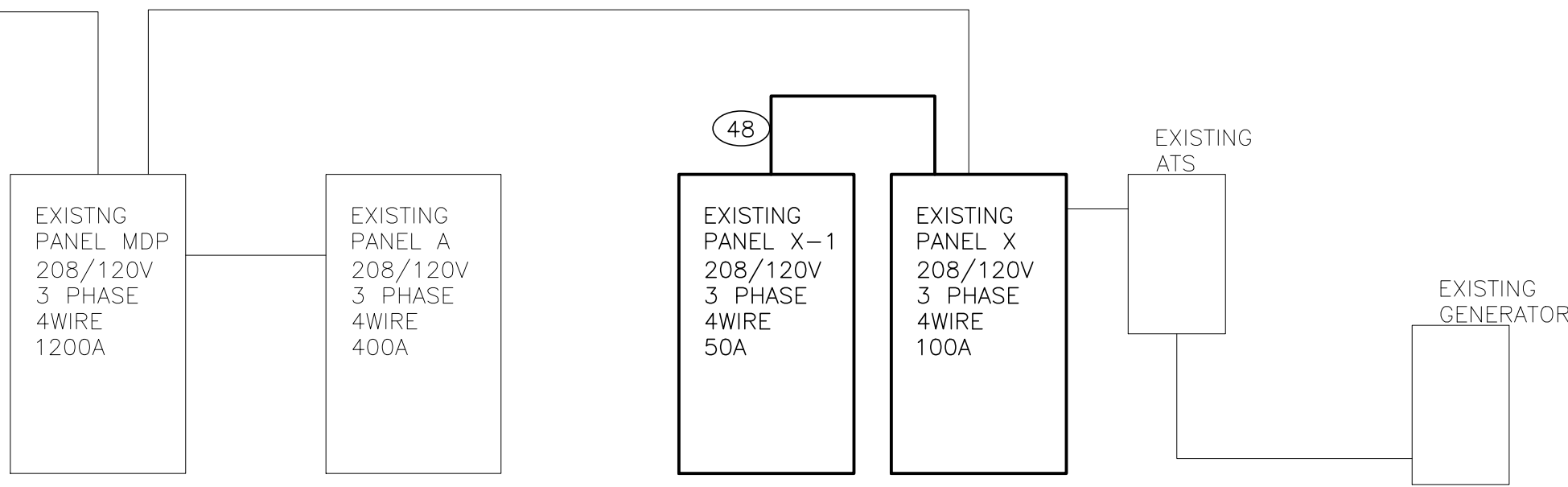
- EXISTING EMERGENCY PANEL X TO BE REWORKED. ENABLE FEED THRU LUGS TO FEED PANEL X-1. SEE PANEL SCHEDULES THIS SHEET.
- DUCTBANK (2) 2" CONDUITS FOR ELECTRICAL/COMMUNICATIONS CONDUIT TO PULL BOXES. TYPICAL. SEE SHEET E501-FS4 FOR DETAILS.
- SURFACE MOUNTED LIGHTING FIXTURE TO BE MOUNTED TO UNDERNEATH OF ROOF DECKING. SEE LIGHTING FIXTURE SCHEDULE THIS SHEET FOR FIXTURE TYPE.
- ELECTRICAL / COMMUNICATIONS PULL BOXES, SEE DETAIL SHEET E501-FS4.
- SECURITY CAMERA BY OTHERS, PROVIDE 1" CONDUIT WITH PULL STRING ONLY. COORDINATE EXACT LOCATION WITH OWNERS SECURITY CONTRACTOR.
- VEEDER ROOT FUEL MANAGEMENT SYSTEM. LOCATE IN COMM ROOM 123.
- PROVIDE DUPLEX RECEPTACLE AND DATA OUTLET FOR NETWORK VIDEO RECORDER.

COMM ROOM 123. COORDINATE EXACT LOCATION WITH OWNERS SECURITY CONTRACTOR.

- DUCTBANK 3/4" ELECTRICAL/COMMUNICATIONS CONDUITS AS REQUIRED FROM PULL BOXES AND STUB UP AT EQUIPMENT LOCATIONS. COORDINATE EXACT NUMBER AND LOCATIONS WITH TANK EQUIPMENT DETAIL 1 SHEET C502-FS6. COORDINATE WITH PANEL X-1 FOR CIRCUITRY.

- LIGHTING CONTACTOR, FOR CANOPY LIGHTING CONTROL. SEE SHEET E501 FOR DETAILS.

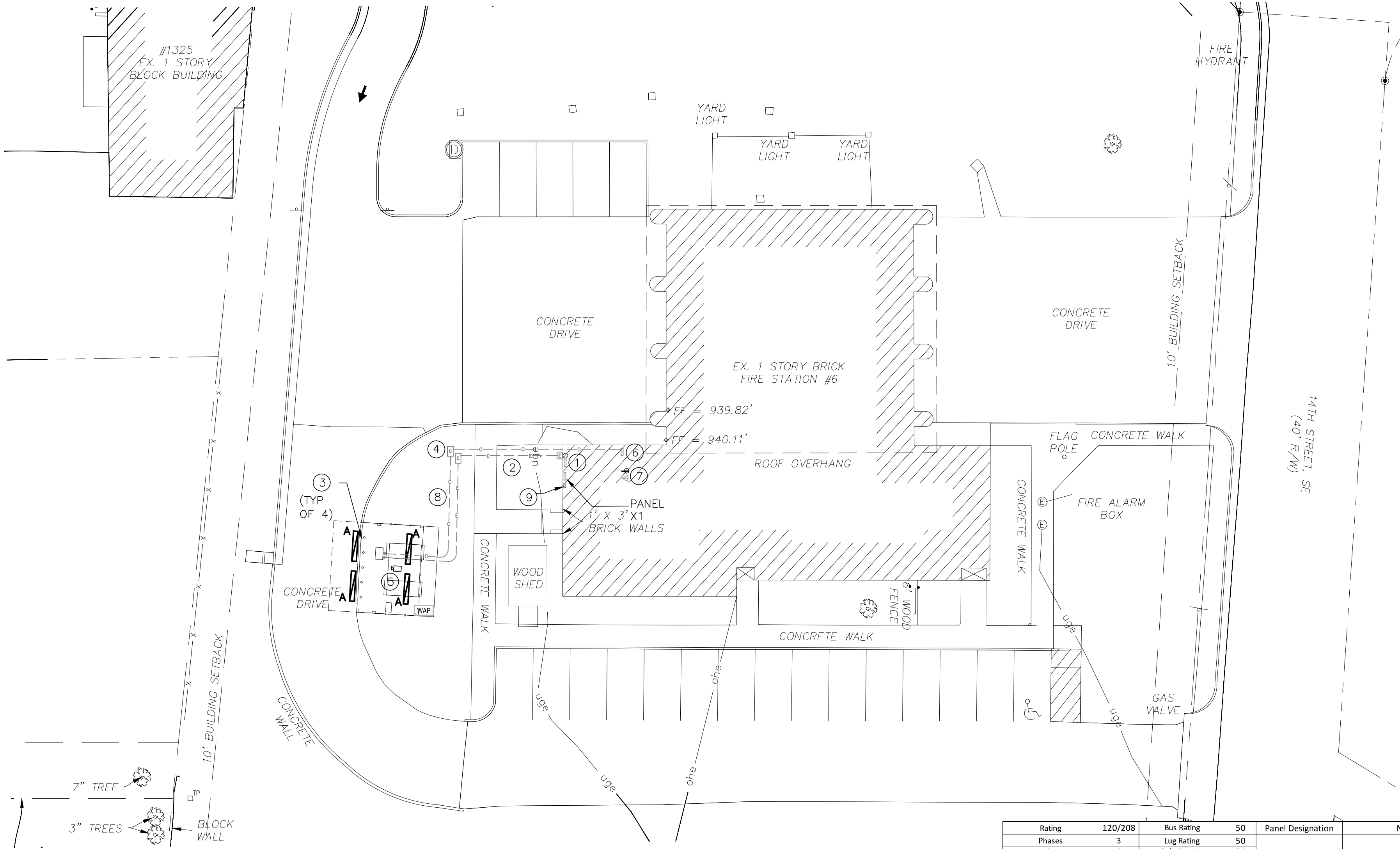
INCOMING SERVICE BY POWER COMPANY



ONE-LINE DIAGRAM - FS6

NOT TO SCALE

COPPER FEEDER SCHEDULE											
TYPE	CONDUIT SIZE	CONDUCTORS	75° AMP RATING	TYPE	CONDUIT SIZE	CONDUCTORS	75° AMP RATING	TYPE	CONDUIT SIZE	CONDUCTORS	75° AMP RATING
212	3/4"	2-#12		21	1-1/4"	2-#1		235	2"	2-#350KMIL	
312	3/4"	3-#12	25	31	1-1/4"	3-#1	130	335	2-1/2"	3-#350KMIL	310
412	3/4"	4-#12		41	1-1/2"	4-#1		435	3"	4-#350KMIL	
20	3/4"	2-#10		21X	1-1/4"	2-#1/0		240	2"	2-#400KMIL	
30	3/4"	3-#10	35	31X	1-1/2"	3-#1/0	150	340	2-1/2"	3-#400KMIL	335
40	3/4"	4-#10		41X	1-1/2"	4-#1/0		440	3"	4-#400KMIL	
28	3/4"	2-#8		22X	1-1/4"	2-#2/0		250	2-1/2"	2-#500KMIL	
38	3/4"	3-#8	50	32X	1-1/2"	3-#3/0	175	350	3"	3-#500KMIL	380
48	3/4"	4-#8		42X	2"	4-#4/0		450	4"	4-#500KMIL	
26	3/4"	2-#6		23X	1-1/2"	2-#3/0		260	2-1/2"	2-#600KMIL	
36	3/4"	3-#6	65	33X	2"	3-#3/0	200	360	3-1/2"	3-#600KMIL	420
46	1"	4-#6		43X	2"	4-#3/0		460	4"	4-#600KMIL	
24	3/4"	2-#4		24X	1-1/2"	2-#4/0		EQUIPMENT GROUNDING CONDUCTORS SCHEDULE			
34	1"	3-#4	85	34X	2"	3-#4/0	230				
44	1-1/4"	4-#4		44X	2-1/2"	4-#4/0		15		14	
23	1"	2-#3		225	2"	2-#250KMIL		20		12	
33	1"	3-#3	100	325	2"	3-#250KMIL	255	30		10	
43	1-1/4"	4-#3		425	3"	4-#250KMIL		40		10	
22	1"	2-#2		230	2"	2-#300KMIL		60		10	
32	1-1/4"	3-#2	115	330	2-1/2"	3-#300KMIL	285	100		8	
42	1-1/4"	4-#2		430	3"	4-#300KMIL		200		6	
NOTES: 1. SEE EQUIPMENT GROUND CONDUCTOR SCHEDULES OR SERVICE GROUNDING DETAIL FOR GROUND CONDUCTORS RATING. 2. ALL INSULATION SHALL BE THIN (ABOVE GRADE) OR THIN (BELOW GRADE) UNLESS NOTED OTHERWISE. 3. CONDUIT SIZE IS BASED ON SCHEDULE 40 PVC. PVC & THWN ARE APPROVED FOR UNDERGROUND FEEDERS ONLY.								300		4	
								400		3	
								500		2	
								600		1	
								800		1/0	



LUMINAIRES SCHEDULE LEGEND							
CALLOUT	SYMBOL	LAMP	DESCRIPTION	DRIVER	MOUNTING	BASIS OF DESIGN (BOD)	LUMENS
A		(1) LED 4000K	96" LOW PROFILE ENCLOSED AND GASKETED INDUSTRIAL FIXTURE, SURFACE MOUNTED WITH MOTION SENSOR	ELECTRONIC	SURFACE	LITHONIA FEM-L96-1200LM-L-PARL-WO-MVOLT G210 5000K 80CRI 5800(1) 0.3V	12073

LIGHTING FIXTURE SCHEDULE NOTES:

BASIS OF DESIGN: THE LIGHTING DESIGN SHOWN IS BASIS OF DESIGN AND IS INTENDED ONLY TO SHOW GENERAL SIZE, CONFIGURATION AND DESCRIPTION OF FIXTURES.

CANOPY FIXTURE CONTROLS: ALL CANOPY FIXTURES SHALL BE CONTROLLED LIGHTING CONTACTOR. TIMER TO BE SET BY OWNER, ON AT 50% & 100% WHEN MOTION IS DETECTED.

Rating	120/208	Bus Rating	50	Panel Designation	NOTES:					
Phases	3	Lug Rating	50	PANEL X-1						
wires	4	Pole Spacing	24							
main breaker	YES	AIC Rating								
breaker rating		Mounting	SURF							
Load Served	WIRE SIZE	CB	CKT	kVA/PHASE		CKT	CB	WIRE SIZE	Load Served	
				A	B	C				
DEISEL TANK PUMP	12	20	3	1.2			2	20	12	CANOPY CAMERA
CANOPY LIGHTS	12	20	3	0.6			4	20	12	GAS TANK PUMP
DEF PUMP	12	20	5	0.3		0.75	6	20	12	VEEDER ROOT SYS
SPARE		20	7	0.5		0.6	8	20	12	NETWORK VIDEO RECORDER
SPARE		20	9				10	20		SPARE
SPARE		20	11				12	20		SPARE
SPARE		20	13				14	20		SPARE
SPARE		20	15				16	20		SPARE
SPACE			17				18			SPACE
SPACE			19				20			SPACE
SPACE			21				22			SPACE
SPACE			23				24			SPACE
		TOTAL LOAD:	2.3	1.5	1.35					
		amps/phase:	19.17	12.5	11.25					

Phases	3	Lug Rating	200	PANEL X					
wires	4	Pole Spacing	42						
main breaker	YES	AIC Rating							
breaker rating	200	Mounting	SURF						
Load Served	WIRE SIZE	CB	CKT	kVA/PHASE	CT	CB	WIRE SIZE	Load Served	
			A	B	C				
EXST. LIGHTS	12	20	1	1.2		2	20	12	EXST DORMITORY LTS
			1.2						
EXST. APP. ROM LTS	12	20	3		1	4	20	12	EXST ALARM RM
EXST. REC. IN KITCHEN	2	20	5		0.9	6	20	12	EXST LIGHTS
					1.2				
EXST. REC. COMM RM.	12	20	7	1.1		8	20	12	EXST. ALARM SYS. P1
				1.1					
EXST. ALARM SYS P2	12	20	9		1.1	10	20	12	EXST. ALARM SYS C1
					1.1				
EXST. ALARM SYS C2	12	20	11		1.1	12	20	12	EXST. PUNCH REG.
					0.48				
EXST. LTS	12	20	13	1.2		14	20	12	EXST. SPARE
EXST PUMP DAY TANK	12	20	15		0.76	16	20	12	EXST SMOKE DETECT.
					0.36				
EXST TEL. HORNS	12	20	17		0.5	18	20	12	EXST PAGING/MONIT.
					0.36				
EXST REC. COMM. RM	12	20	19	1.1		20	20	12	EXST RECPT TOILETS
				0.48					
EXST L. FRIDGE/MICRO.	12	20	21		1.2	22	20	12	EXST MEDIC BAY DR
					1				
EXST K. REFRIG.	12	20	23		1.2	24	20	12	EXST GRIDDLE
					1.2				
EXST DOOR FRT	12	20	25	1		26	20	12	EXST EXHAUST DR FRT
				1					
EXST EXHAUST DR FRT	12	20	27		1	28	20	12	EXST CNTRL BOX
					0.7				
EXST ELEC DOOR FRT	12	20	29			30	20	12	EXST CNTRL BOX
						1			
EXST #2 MICRO.	12	20	31	0.8		32			SPACE
SPACE			33			34			SPACE
SPACE			35			36			SPACE
SPACE			37			38			SPACE
SPACE			39			40			SPACE
SPACE			41			42			SPACE
TOTAL LOAD:			10.18	9.32	8.64				
amps/phase:			84.83	77.67	72				

SPECTRUM DESIGN
architects | engineers

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SPECTRUMPC.COM



CITY OF ROANOKE
REFUELING CENTERS
FIRE STATION #6

ROANOKE CITY PROJECT NO.: RFP #24-10-66
Spectrum Design Project No.: 23181



PROJ. MGR.: CHECKED BY: DRAWN BY:
MAR MAR CLH

SHEET ISSUE DATE:
06.19.2025

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SHEET REVISIONS:
REV 1 08.21.2025 CBLD REVIEW 1

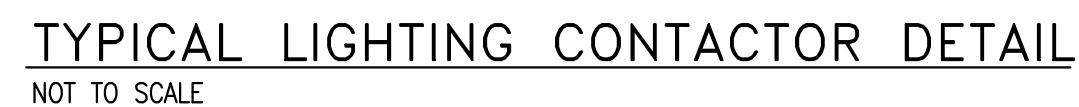
KEY PLAN:

SHEET NAME:
ELECTRICAL - SITE
PLAN

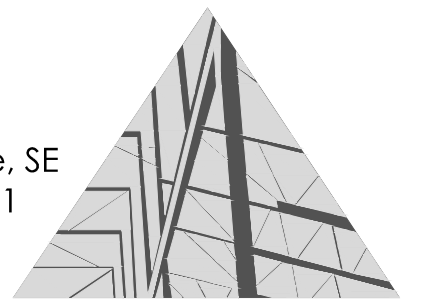
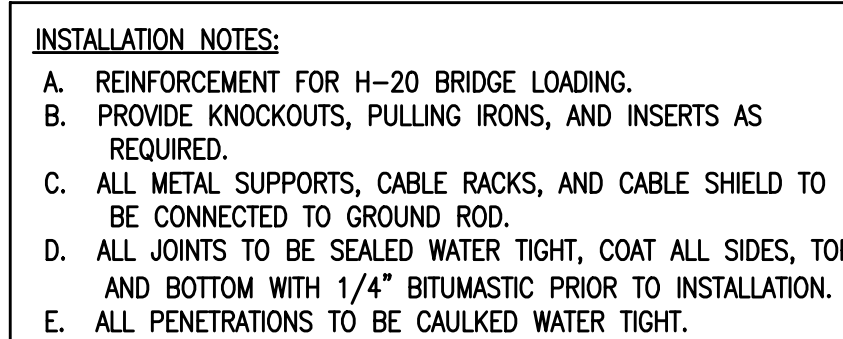
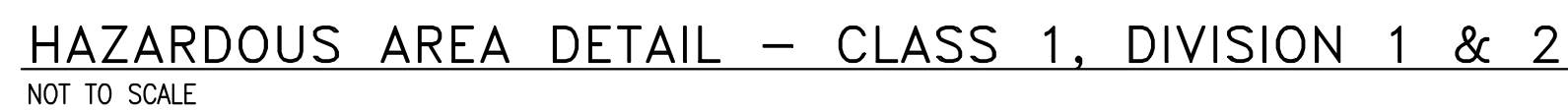
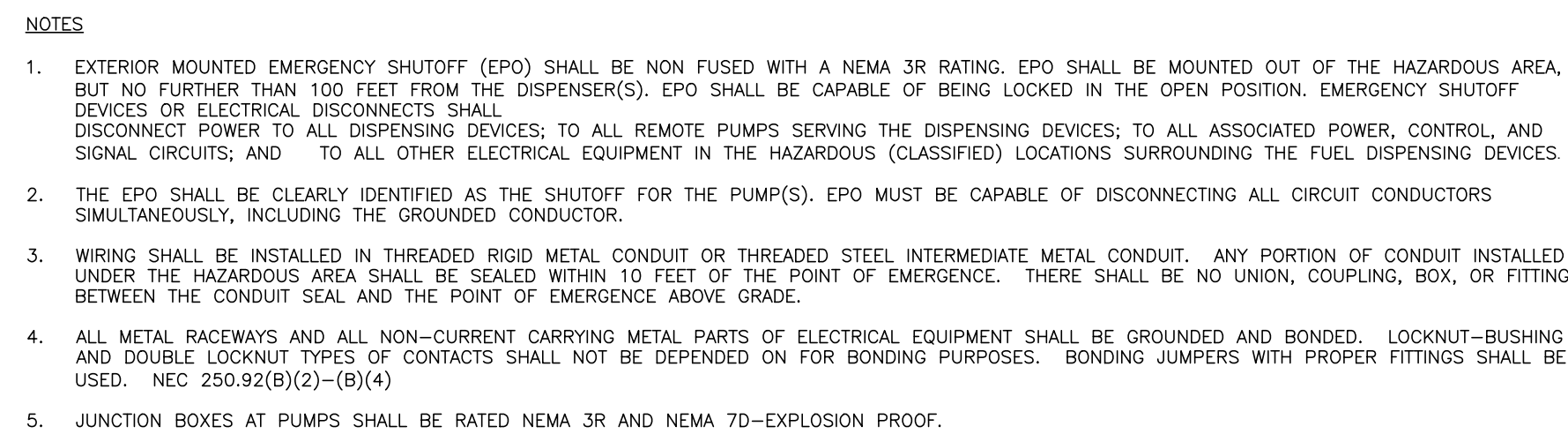
SHEET NUMBER:
E101-FS6



AHJ APPROVAL STAMP



- LIGHTING CONTACTOR NOTES:**
- A. EACH CONTACTOR SHALL BE ELECTRICALLY HELD WITH 30A CONTACTS, 120/277V RATED. PROVIDE WITH HAND-OFF-AUTO SELECTOR AND NEMA 1 ENCLOSURE.
 - B. PROVIDE 120V OR 277V CIRCUIT FOR CONTROL OF LIGHTING CONTACTOR.
 - C. ROUTE CIRCUITS TO EXTERIOR CANOPY LIGHTING FIXTURES VIA LIGHTING CONTACTOR AS INDICATED ON THE SITE PLAN AND LIGHTING FLOOR PLANS.
 - D. PROVIDE LIGHTING CONTACTORS WITH UL 924 LISTED EMERGENCY RELAY CAPABLE OF SWITCHING CONTACTOR ON AND TURNING ASSOCIATED LIGHTING CIRCUITS ON UPON LOSS OF NORMAL POWER REGARDLESS OF BAS SYSTEM OR LIGHTING CONTACTOR SWITCH INPUT. RELAY SHALL SENSOR NORMAL POWER IN AREA SERVED BY EMERGENCY LIGHTING CIRCUITS.
 - E. CONTACTOR SHALL BE CAPABLE OF BEING ENGAGED BY INPUT FROM EITHER THE BAS SYSTEM INPUT OR THE EXTERIOR LIGHTING CONTACTOR TIMER (OR EMERGENCY RELAY FOR EMERGENCY CONTACTORS). PROVIDE ALL WIRING AND CONNECTIONS REQUIRED FOR SYSTEM OPERATION.



CITY OF ROANOKE REFUELING CENTERS FIRE STATION #6

ROANOKE CITY PROJECT NO.: **RFP #24-10-66**
Spectrum Design Project No.: **23181**



PROJ. MGR.: **MAR** CHECKED BY: **MAR** DRAWN BY: **CLH**

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REV 1	08.21.2025	CBLD REVIEW 1
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KEY PLAN:

SHEET NAME:
ELECTRICAL - DETAILS

SHEET NUMBER:
E501-FS6



AHJ APPROVAL STAMP