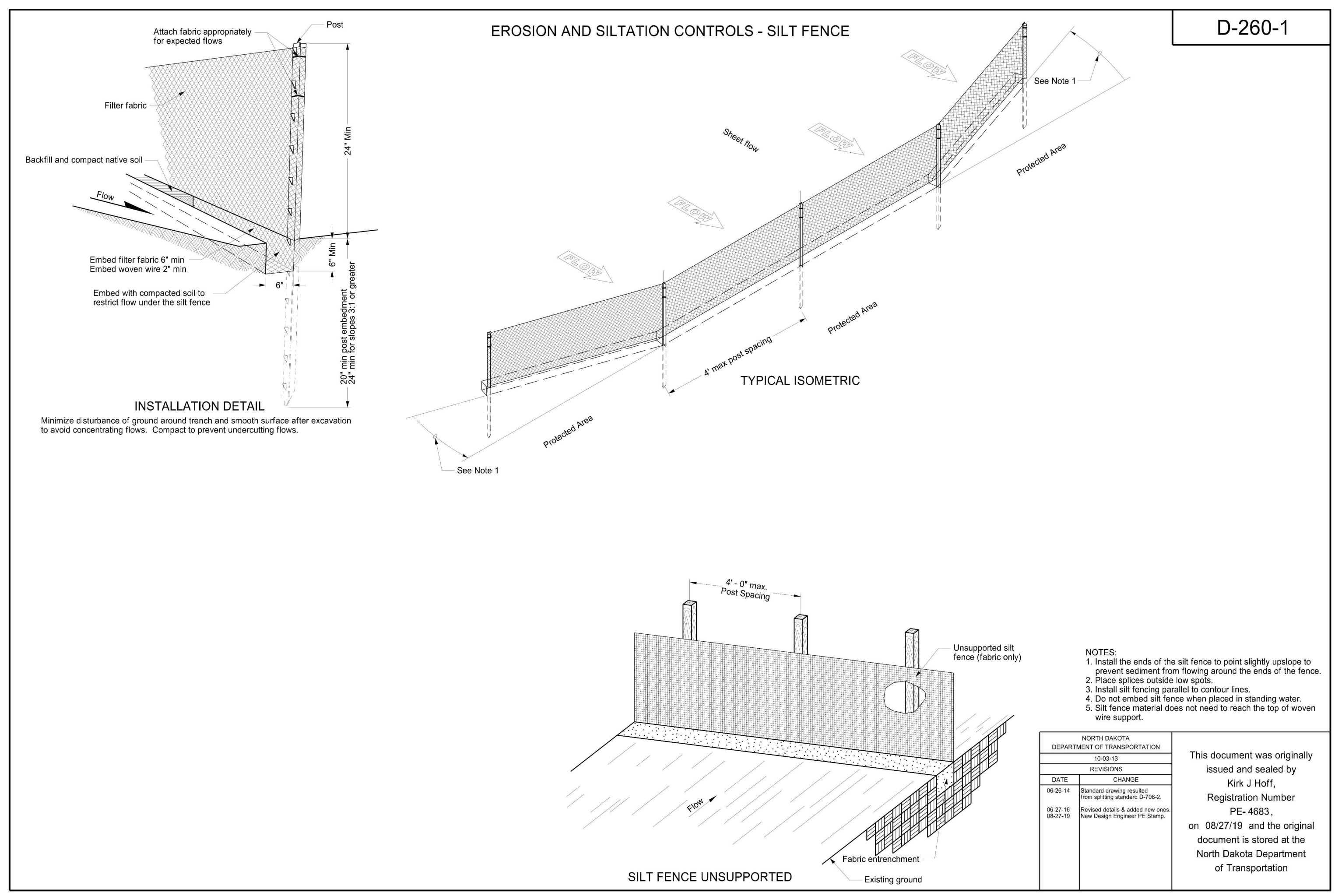


GENERAL NOTES:

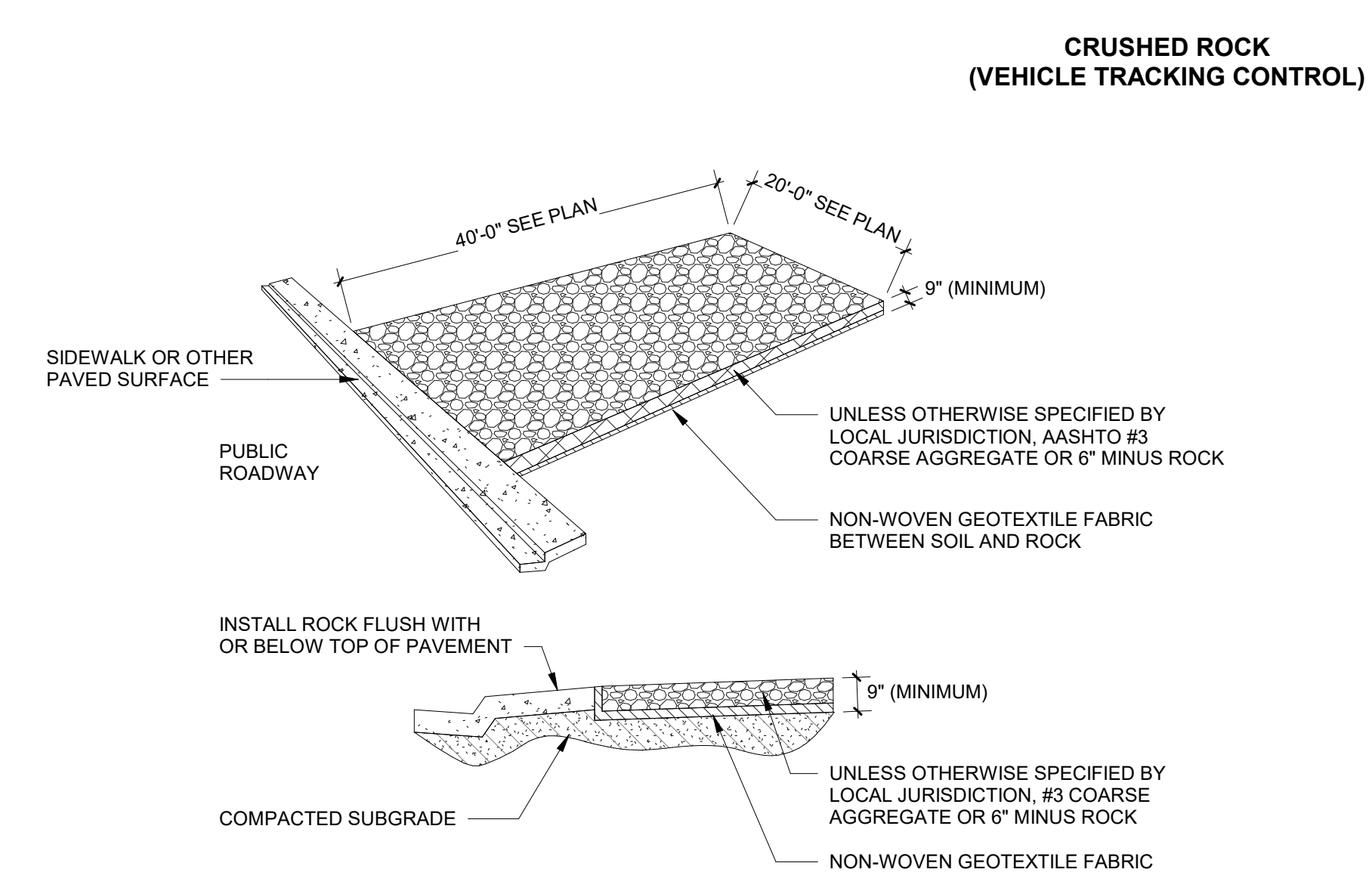
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SHEET SPECIFIC NOTES:

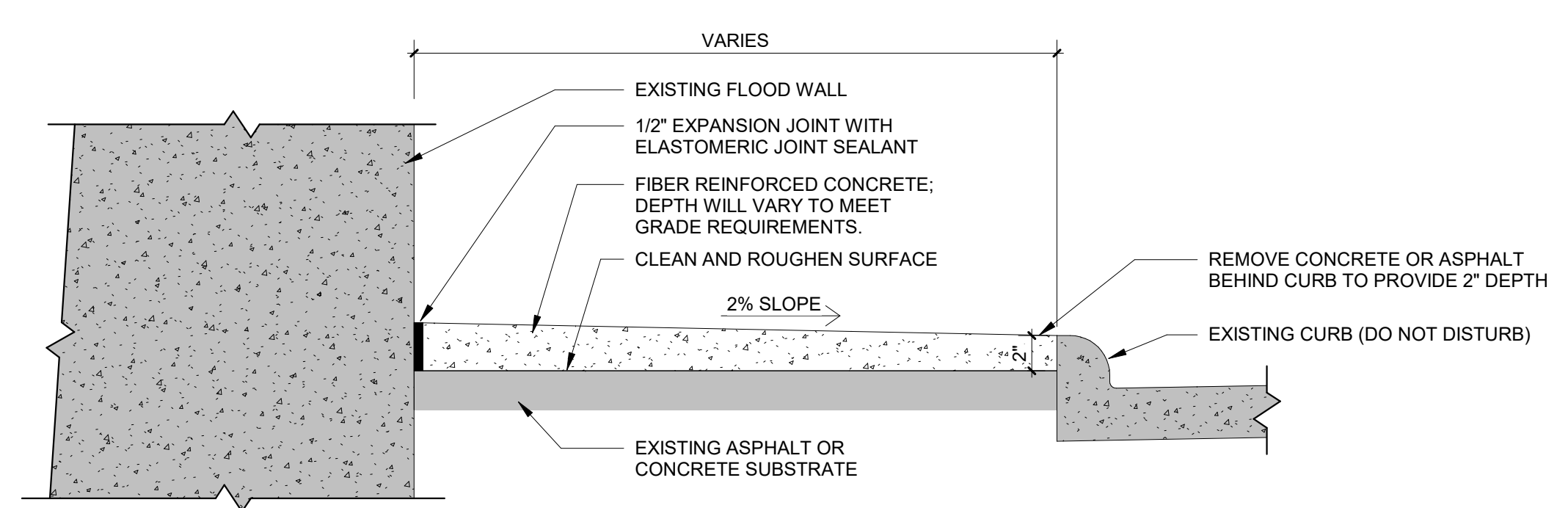
- ALL EROSION CONTROL MATERIALS AND INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH NDDOT BEST MANAGEMENT PRACTICES (MOST CURRENT EDITION).



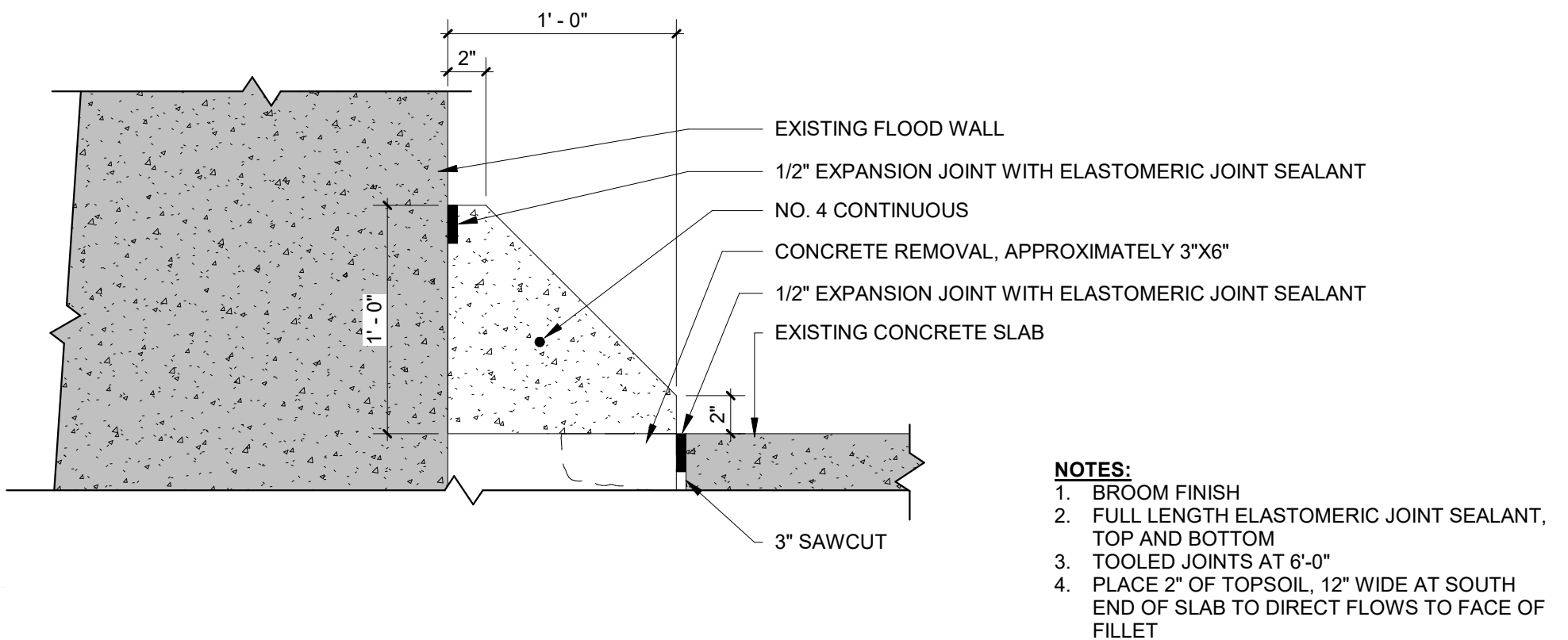
1 EROSION AND SILTATION CONTROLS - SILT FENCE



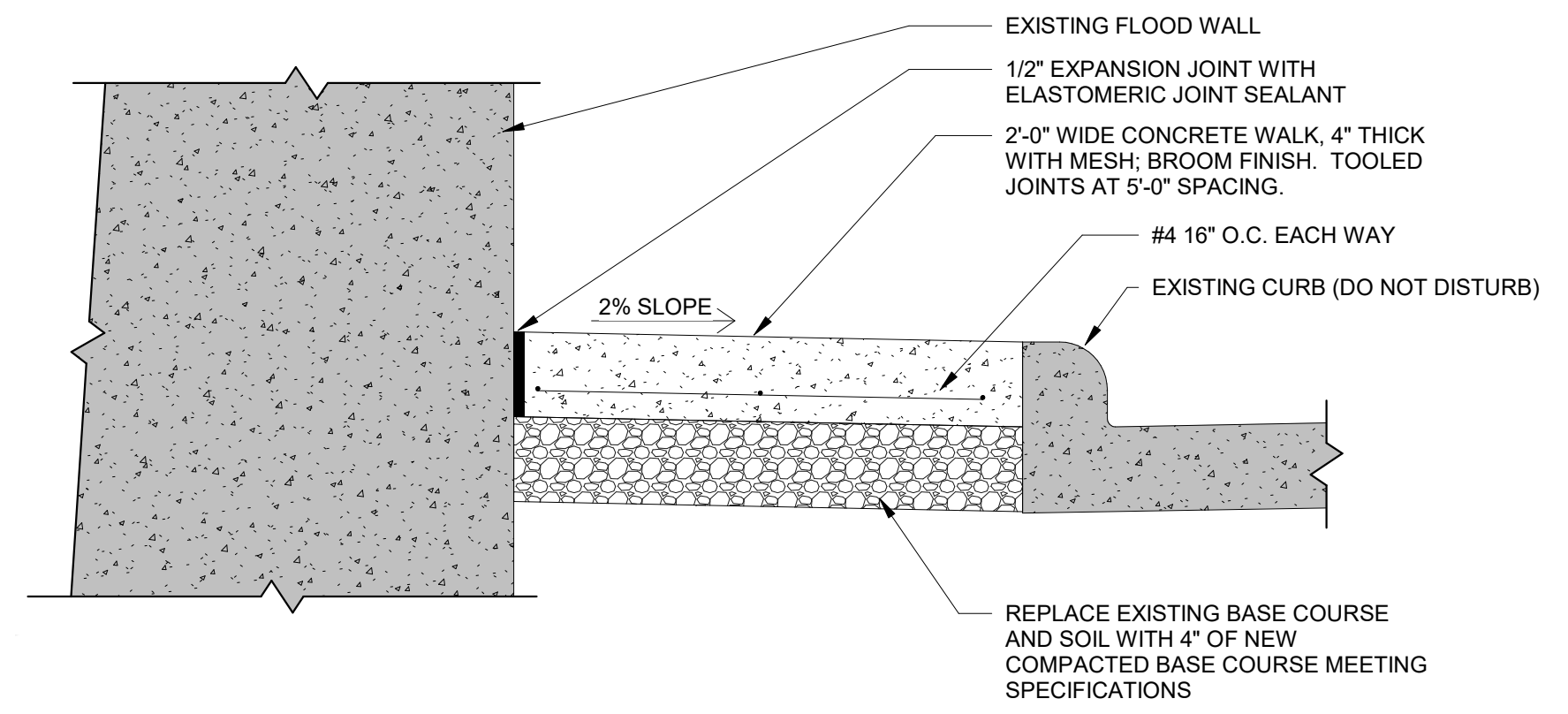
2 CIVIL - STABILIZED CONSTRUCTION ENTRANCE



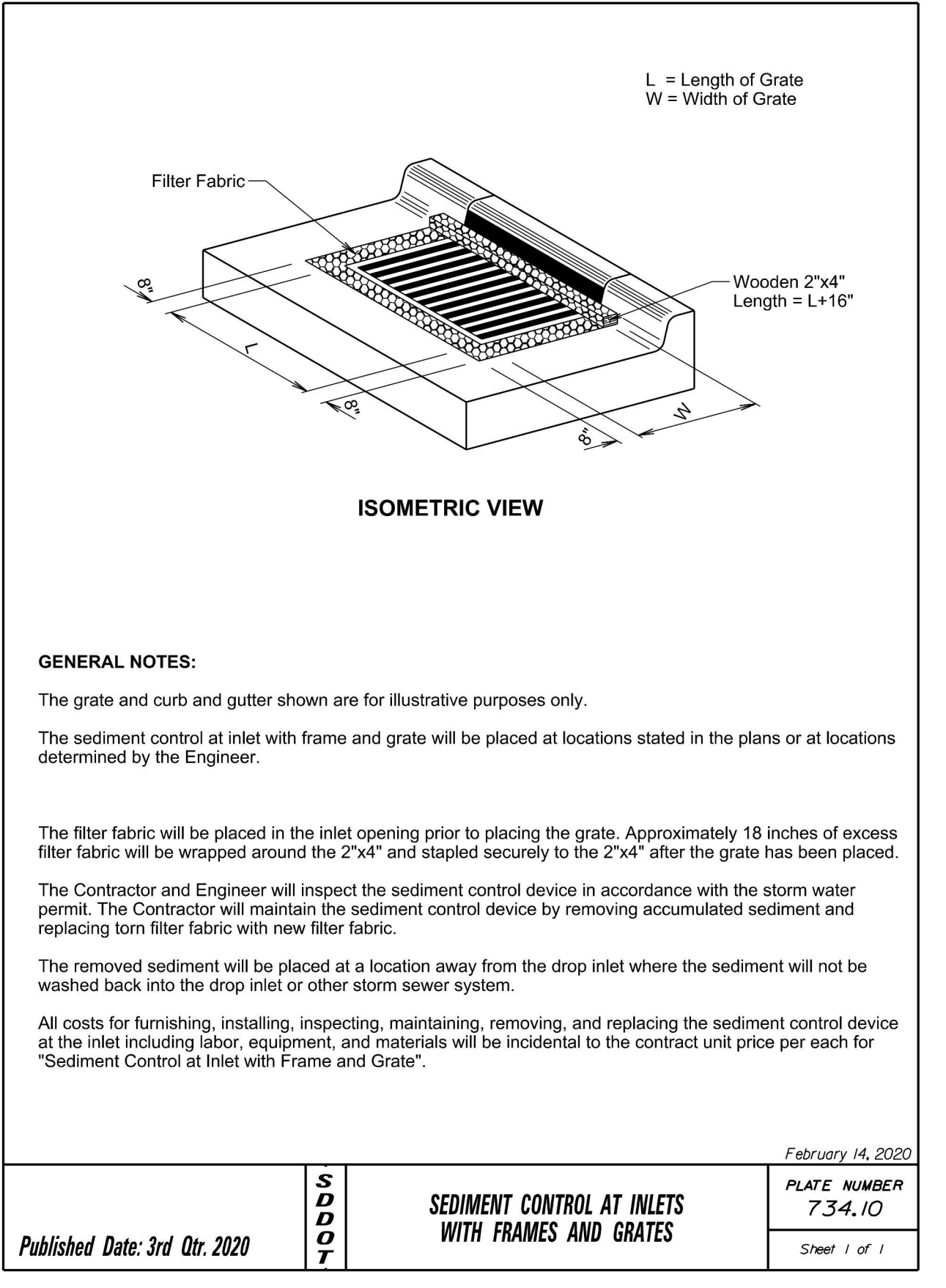
4 CONCRETE OVERLAY DETAIL
1 1/2" = 1'-0"



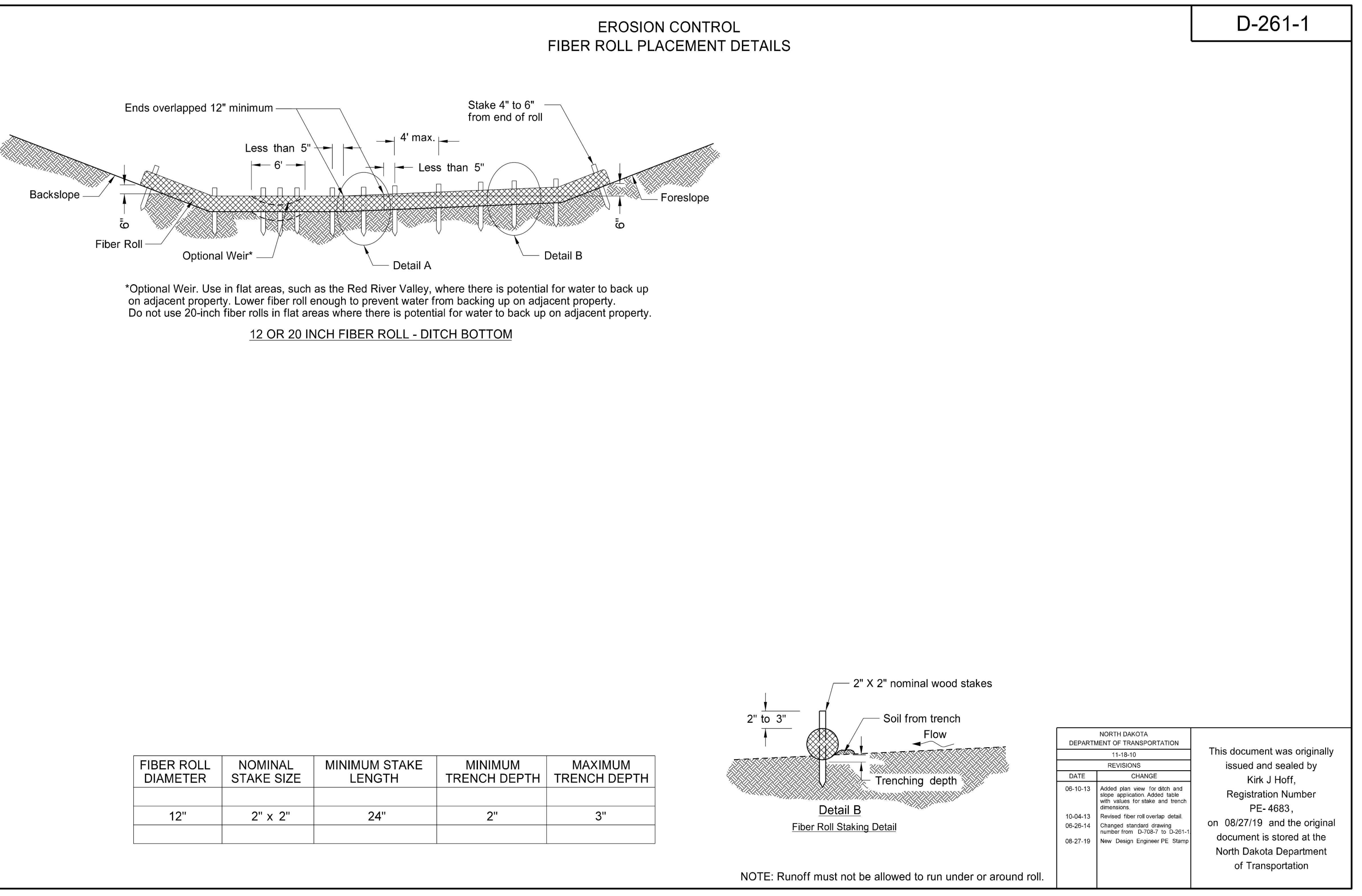
6 CONCRETE FILLET SECTION
1 1/2" = 1'-0"



6 CONCRETE WALK REPLACEMENT
1 1/2" = 1'-0"



7 SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES



3 EROSION CONTROL FIBER ROLL PLACEMENT DETAILS

CONSTRUCTION DOCUMENTS

<p>Revisions:</p> <p>Date:</p>	<p>CONSULTANT</p> <p>ALBERTSON ENGINEERING INC. 3202 WEST MAIN STREET, SUITE C RAPID CITY, SOUTH DAKOTA 57702 PHONE (605) 343-9606</p>	<p>ARCHITECT/ENGINEER OF RECORD</p> <p>DJ&A, P.C. 3202 SOUTH RUSSELL STREET MISSOULA, MONTANA 59801 PHONE (406) 721-4320</p>	<p>STAMP</p> <p>Professional Engineer Kirk J Hoff 6893 12/18/2020 SOUTH DAKOTA</p>	<p>Office of Construction and Facilities Management</p> <p>VA U.S. Department of Veterans Affairs</p>	<p>Drawing Title CIVIL DETAILS</p> <p>Approved:</p>	<p>Phase CONSTRUCTION DOCUMENTS</p>	<p>Project Title REPAIR FLOOD WALL LEVEE SYSTEM</p> <p>Project Number 437-19-104</p> <p>Building Number SITE</p>	<p>Location FARGO VA HEALTH CARE SYSTEM</p> <p>Issue Date DECEMBER 18, 2020</p> <p>Checked SB</p> <p>Drawn KZ</p>	<p>Drawing Number GS2.10</p> <p>Dwg. 6 of 15</p>
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12/15/2020 12:10:45 PM
L:\19-2481 AE Fabric IDO Iowa, ND03 19 2481 A02 North Dakota Repair Flood Wall Levee System\Drawings\Architectural\2481 - ND Repair Flood Wall Levee System.dwg

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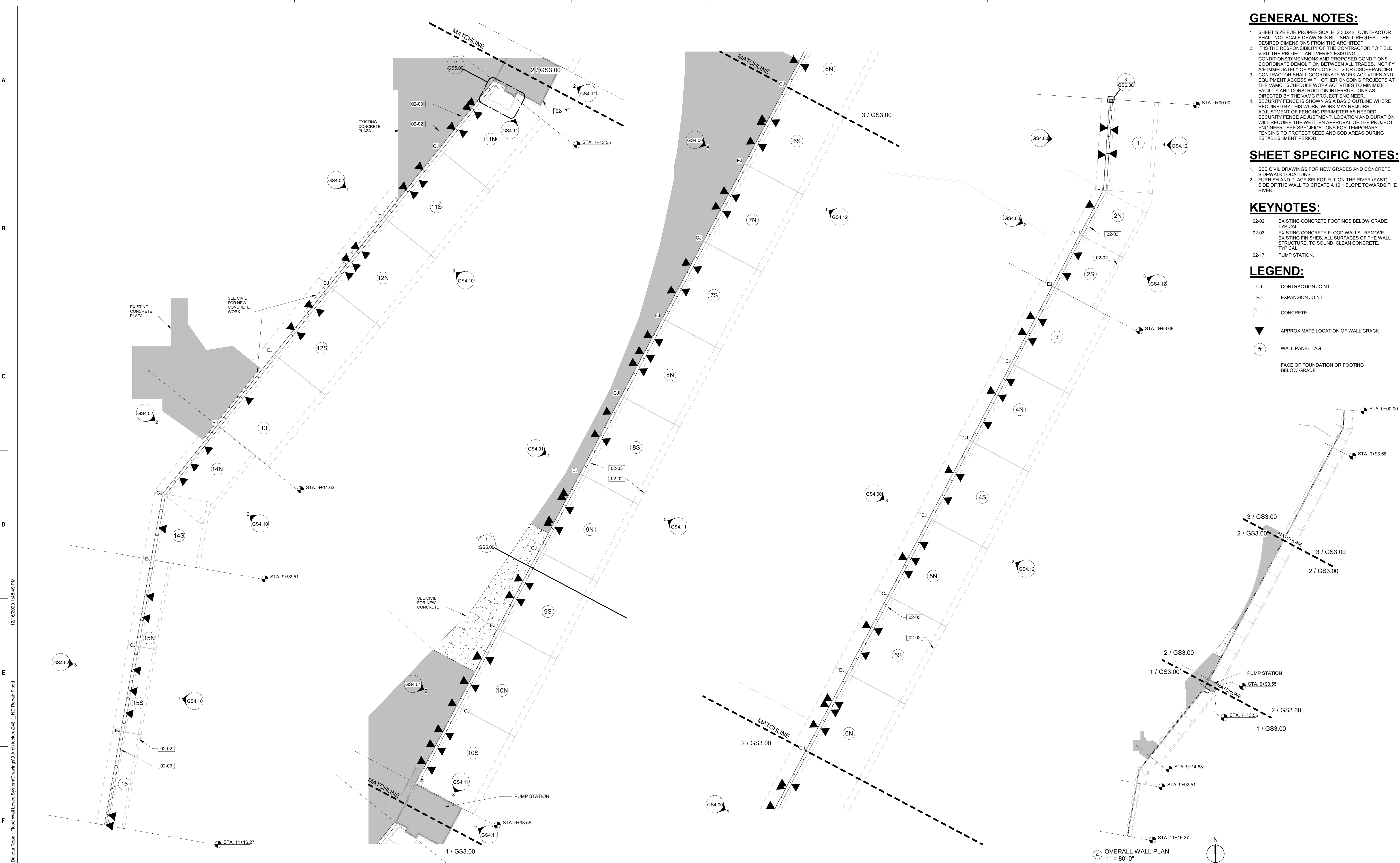
1. SEE CIVIL DRAWINGS FOR NEW GRADES AND CONCRETE SIDEWALK LOCATIONS.
2. FURNISH AND PLACE SELECT FILL ON THE RIVER (EAST) SIDE OF THE WALL TO CREATE A 10:1 SLOPE TOWARDS THE RIVER.

KEYNOTES:

- 02-02 EXISTING CONCRETE FOOTINGS BELOW GRADE, TYPICAL.
- 02-03 EXISTING CONCRETE FLOOD WALLS. REMOVE EXISTING FINISHES, ALL SURFACES OF THE WALL STRUCTURE, TO SOUND, CLEAN CONCRETE, TYPICAL.
- 02-17 PUMP STATION.

LEGEND:

- CJ CONTRACTION JOINT
- EJ EXPANSION JOINT
- CONCRETE
- APPROXIMATE LOCATION OF WALL CRACK
- # WALL PANEL TAG
- FACE OF FOUNDATION OR FOOTING BELOW GRADE



1 WALL PLAN SOUTH
1/16" = 1'-0"

2 WALL PLAN CENTER
1/16" = 1'-0"

3 WALL PLAN NORTH
1/16" = 1'-0"

4 OVERALL WALL PLAN
1" = 80'-0"

<p>CONSULTANT</p> <p>ALBERTSON ENGINEERING INC. 3202 WEST MAIN STREET, SUITE C RAPID CITY, SOUTH DAKOTA 57702 PHONE (605) 343-9606</p>	<p>ARCHITECT/ENGINEER OF RECORD</p> <p>DJ&A, P.C. 3202 SOUTH RUSSELL STREET MISSOULA, MONTANA 59801 PHONE (406) 721-4320</p>	<p>ARCHITECT/ENGINEER OF RECORD</p> <p>FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA 57701 PHONE (605) 342-9470</p>	<p>Office of Construction and Facilities Management</p> <p>U.S. Department of Veterans Affairs</p>
<p>Revisions: _____ Date: _____</p>		<p>Stamp: REGISTERED PROFESSIONAL ARCHITECT, STATE OF SOUTH DAKOTA, JEFFREY P. ...</p>	

CONSTRUCTION DOCUMENTS

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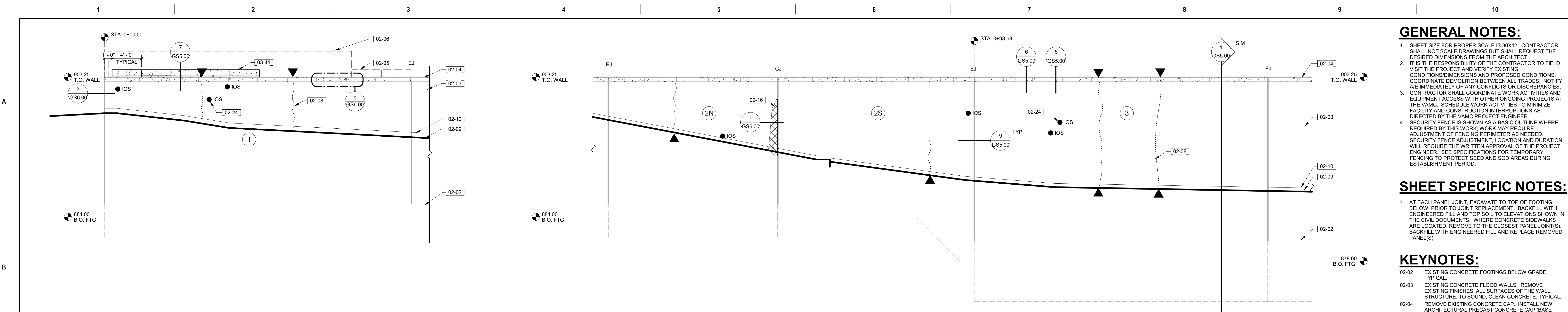
1. AT EACH PANEL JOINT, EXCAVATE TO TOP OF FOOTING BELOW. PRIOR TO JOINT REPLACEMENT, BACKFILL WITH ENGINEERED FILL AND TOP SOIL TO ELEVATIONS SHOWN IN THE CIVIL DOCUMENTS. WHERE CONCRETE SIDEWALKS ARE LOCATED, REMOVE TO THE CLOSEST PANEL JOINT(S), BACKFILL WITH ENGINEERED FILL AND REPLACE REMOVED PANEL(S).

KEYNOTES:

- 02-02 EXISTING CONCRETE FOOTINGS BELOW GRADE, TYPICAL.
- 02-03 EXISTING CONCRETE FLOOD WALLS. REMOVE EXISTING FINISHES, ALL SURFACES OF THE WALL STRUCTURE, TO SOUND, CLEAN CONCRETE. TYPICAL.
- 02-04 REMOVE EXISTING CONCRETE CAP. INSTALL NEW ARCHITECTURAL PRECAST CONCRETE CAP (BASE BID). UNDER DUCT ALTERNATE #1. REPAIR EXISTING CONCRETE CAP IN PLACE. SEE STRUCTURAL.
- 02-05 REMOVE EXISTING PYRAMIDAL CONCRETE CAPS.
- 02-06 REMOVE EXISTING CHAIN LINK FENCE COURSE.
- 02-08.1 TYPICAL WALL CRACK NOTED TO LEAK BY VAMC STAFF AT HIGH WATER EVENTS; FIELD VERIFY ACTUAL COURSE; PROVIDE HIGH PRESSURE POLYURETHANE INJECTION FOR THE FULL HEIGHT OF THIS CRACK (INCLUDING CRACK EXTENSIONS BELOW GRADE AT RIVER SIDE). INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE SPECIFICATIONS.
- 02-09 EXISTING GRADE, TYPICAL.
- 02-10 EXPOSED CONCRETE FINISH, TYPICAL FINISH DOES NOT EXTEND TO GRADE.
- 02-11 EXISTING PORTLAND BROOMED FINISH, TYPICAL.
- 02-12 ARCHITECTURAL RELIEF PANEL, TYPICAL WHERE SHOWN.
- 02-15 REGULAR SPACED CRACKING WAS NOTED IN THIS REVEAL THAT CORRESPONDS WITH SHALLOW COVER ON THE REINFORCEMENT. REMOVE LOOSE CONCRETE TO SOUND SUBSTRATE AND PATCH TO MATCH ADJACENT SURFACES.
- 02-16 AREA OF SIGNIFICANT CONCRETE FRACTURING OR DELAMINATION.
- 02-24 EXISTING IRON OXIDE STAINING. REMOVE AND GRIND TO SOUND SUBSTRATE; PATCH TO MATCH ADJACENT SURFACES. TYPICAL AT ALL LOCATIONS.
- 03-41 PYRAMIDAL PRECAST CONCRETE CAPS; SEE DETAIL 7/GS5.00

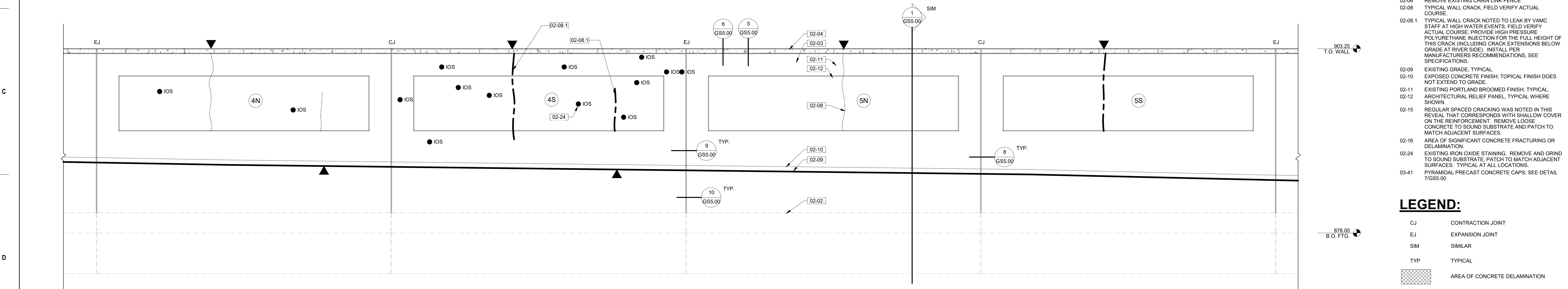
LEGEND:

- CJ CONTRACTION JOINT
- EJ EXPANSION JOINT
- SIM SIMILAR
- TYP TYPICAL
- [Hatched Box] AREA OF CONCRETE DELAMINATION
- [Vertical Line Box] AREA OF LOW COVERAGE FOR REINFORCING STEEL
- [Stippled Box] CONCRETE
- IOS IRON OXIDE STAINING, SEE KEYNOTES
- ▼ APPROXIMATE LOCATION OF WALL CRACK, ASSUMED LOCATION BELOW GRADE
- EXISTING FOUNDATION
- EXISTING GRADE
- - - PROPOSED GRADE
- · - · - WALL CRACK (IN ELEVATION)
- · - · - WALL CRACK, NOTED TO SEEP BY VAMC (IN ELEVATION)
- # WALL PANEL TAG

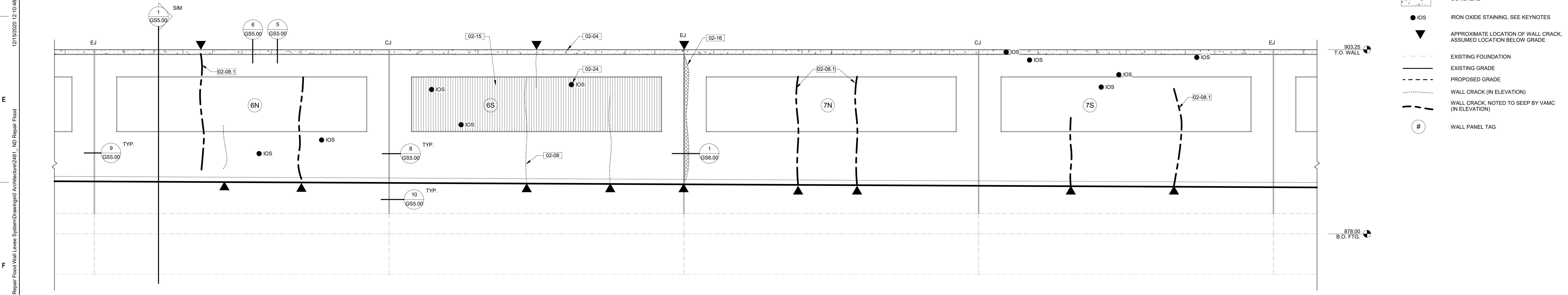


1 WALL ELEVATION - WEST - 1
3/16" = 1'-0"

2 WALL ELEVATION - WEST - 2
3/16" = 1'-0"



3 WALL ELEVATION - WEST - 3
3/16" = 1'-0"



4 WALL ELEVATION - WEST - 4
3/16" = 1'-0"

CONSTRUCTION DOCUMENTS

Revisions:	Date:

CONSULTANT

ALBERTSON ENGINEERING INC.
3202 WEST MAIN STREET, SUITE C
RAPID CITY, SOUTH DAKOTA 57702
PHONE (605) 343-9606

DJ&A, P.C.
3202 SOUTH RUSSELL STREET
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ARCHITECT/ENGINEER OF RECORD

FOURFRONT DESIGN INC.

FOURFRONT DESIGN, INC.
517 7TH STREET
RAPID CITY, SOUTH DAKOTA
57701
PHONE (605) 342-9470

STAMP

REGISTERED PROFESSIONAL ARCHITECT
STATE OF SOUTH DAKOTA
JAMES P. BIRNBAUM
12-16-20

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title
WALL ELEVATIONS - WEST

Approved: _____

Phase
CONSTRUCTION DOCUMENTS

Project Title
REPAIR FLOOD WALL LEVEE SYSTEM

Project Number
437-19-104

Building Number
SITE

Location
FARGO VA HEALTH CARE SYSTEM

Issue Date
DECEMBER 18, 2020

Checked
JR

Drawn
KZ

Drawing Number
GS4.00

Dwg. 8 of 15

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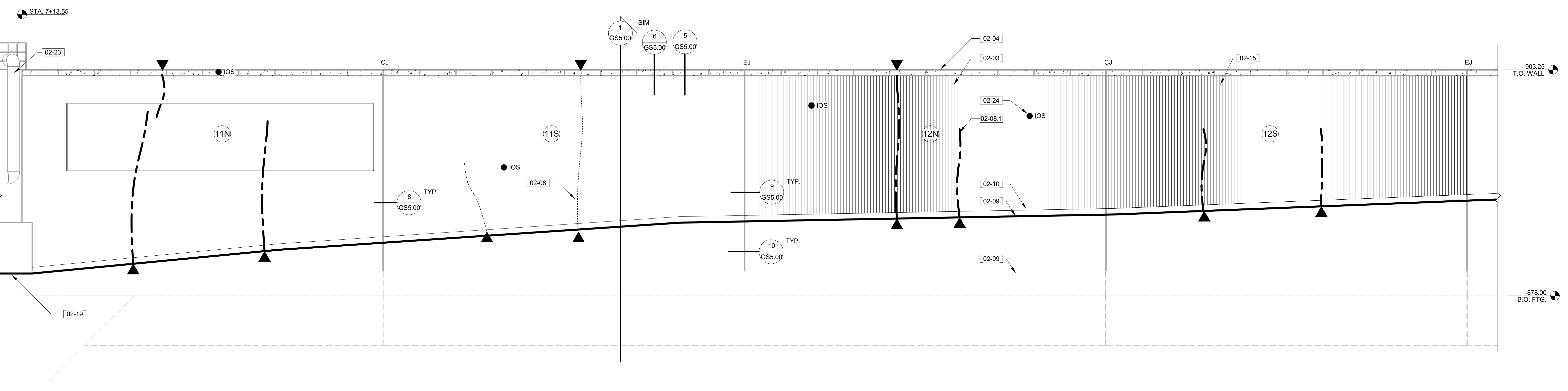
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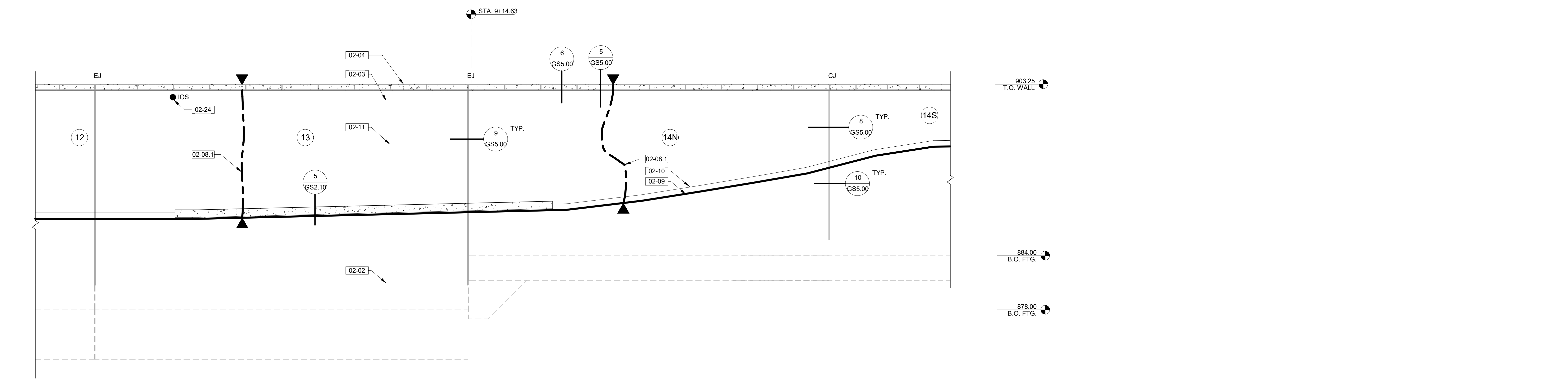
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- 02-05 REMOVE EXISTING PYRAMIDAL CONCRETE CAPS. TYPICAL.
- 02-08 TYPICAL WALL CRACK. FIELD VERIFY ACTUAL COURSE.
- 02-08.1 TYPICAL WALL CRACK NOTED TO LEAK BY VAMC STAFF AT HIGH WATER EVENTS. FIELD VERIFY ACTUAL COURSE. PROVIDE HIGH PRESSURE POLYURETHANE INJECTION FOR THE FULL HEIGHT OF THIS CRACK (INCLUDING CRACK EXTENSIONS BELOW GRADE AT RIVER SIDE). INSTALL FER MANUFACTURERS RECOMMENDATIONS. SEE SPECIFICATIONS.
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- 02-19 SUMP PIT SERVICING THE PUMP STATION.
- 02-23 BACK UP PUMP PIPE.
- 02-24 EXISTING IRON OXIDE STAINING. REMOVE AND GRIND TO SOUND SUBSTRATE. PATCH TO MATCH ADJACENT SURFACES. TYPICAL AT ALL LOCATIONS.
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LEGEND:

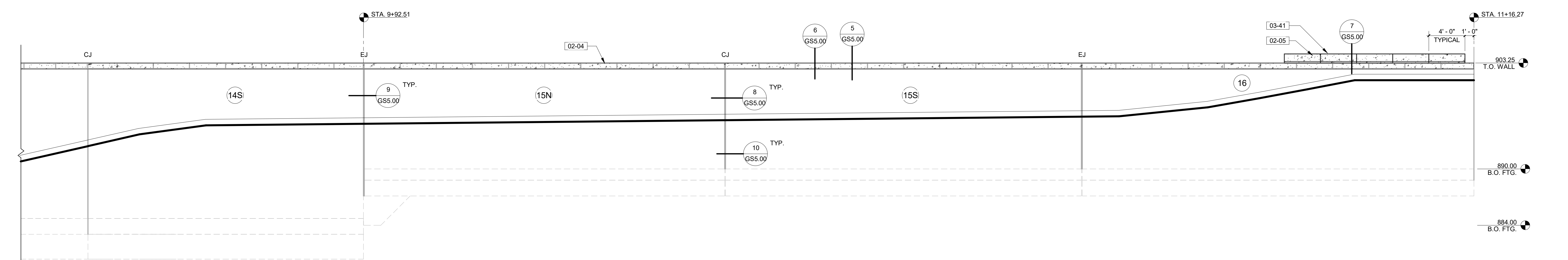
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- SIM SIMILAR
- TYP TYPICAL
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- [Diagonal Lines Box] AREA OF JOINT EXCAVATION
- [Dotted Box] CONCRETE
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2 WALL ELEVATION - WEST - 13
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3 WALL ELEVATION - WEST - 15
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CONSTRUCTION DOCUMENTS

Revisions:	Date:

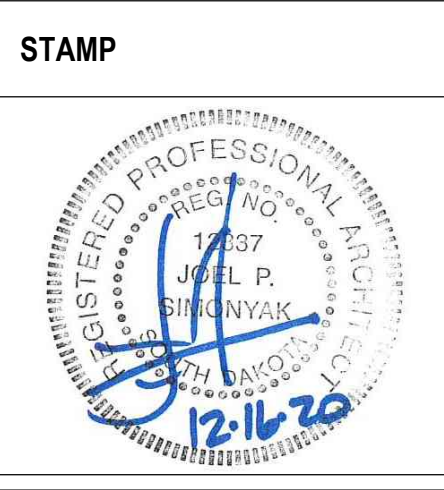
CONSULTANT

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Phase
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Approved: _____

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Dwg. 10 of 15

12/15/2020 12:10:48 PM L:\15-2481-AE-Info\DD\Draws_ND\03 19 2481 ADJ North Dakota Repair Flood Wall Levee System\Drawings\15-ND Repair Flood Wall Levee System\Drawings\15-ND Repair Flood Wall Levee System.dwg

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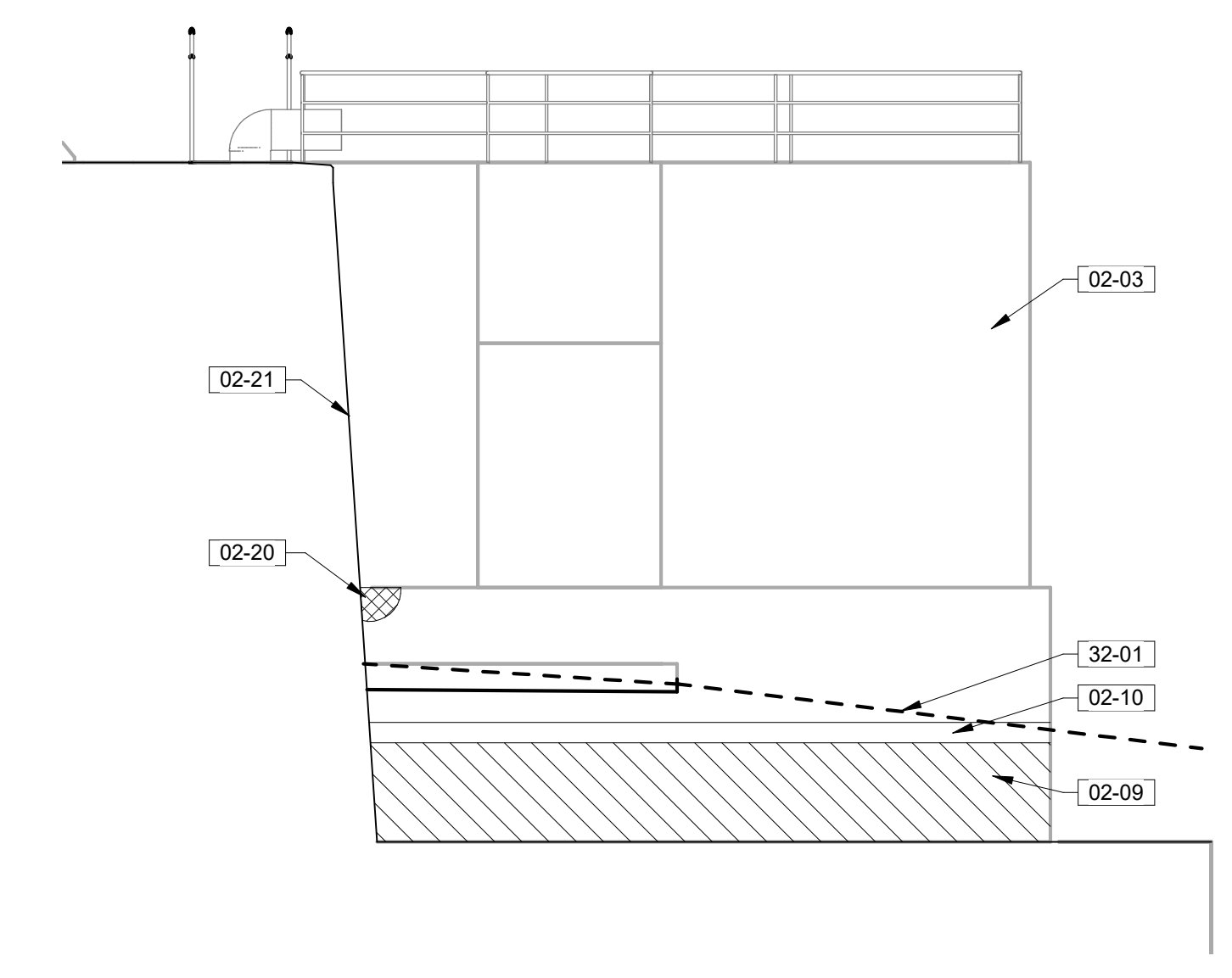
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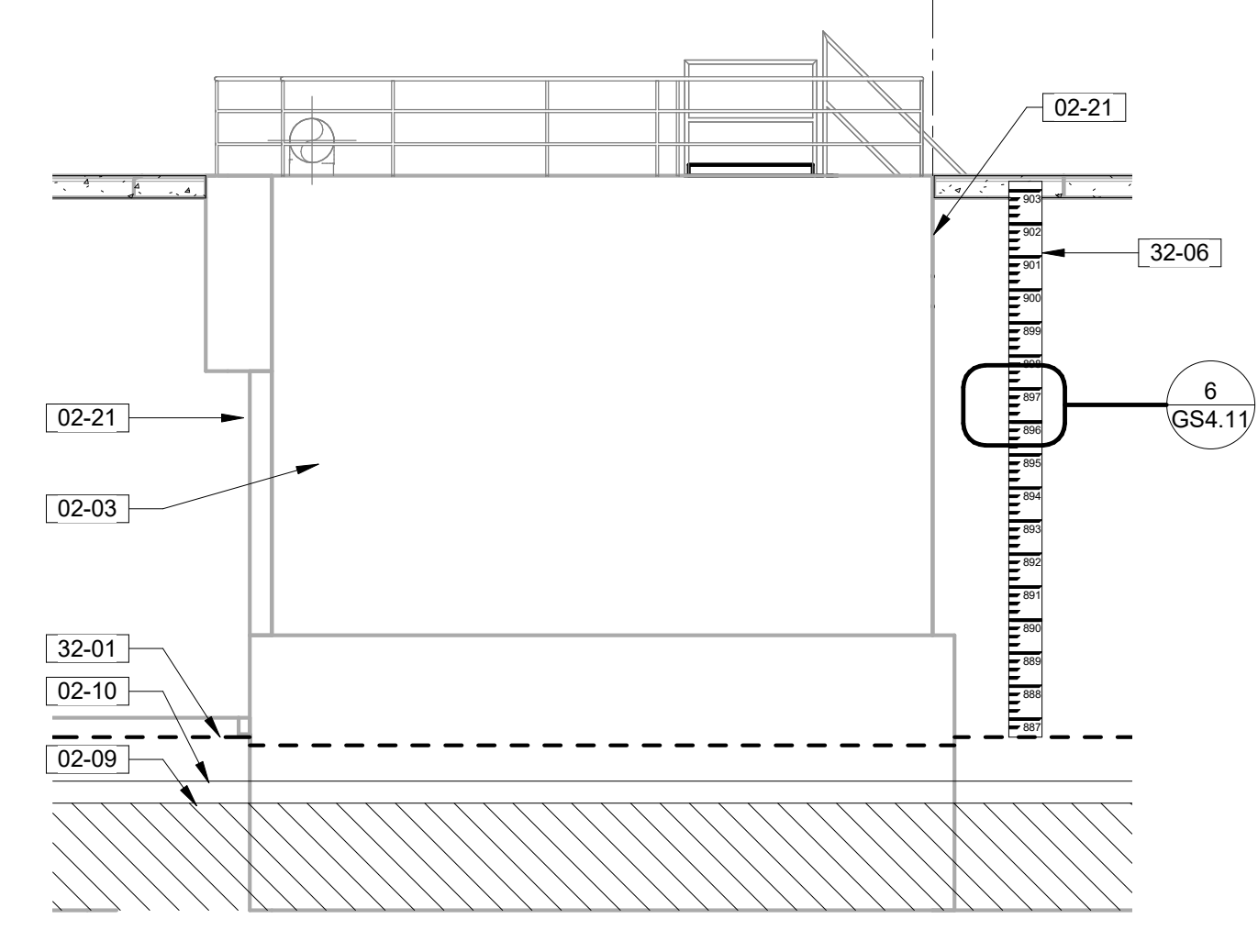
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- 02-13 EXCAVATE TO TOP OF FOOTING FOR JOINT REPLACEMENT AND WATERPROOF MEMBRANE INSTALLATION, TYPICAL.
- 02-17 PUMP STATION.
- 02-20 DELAMINATION/SPALL EXPOSED STEEL LOCATIONS.
- 02-21 EXPANSION JOINT AT PUMP STATION/FLOOD WALL JUNCTION.
- 02-24 EXISTING IRON OXIDE STAINING. REMOVE AND GRIND TO SOUND SUBSTRATE; PATCH TO MATCH ADJACENT SURFACES. TYPICAL AT ALL LOCATIONS.
- 03-42 INSTALL NEW SEALANT JOINT AT EACH HEAD JOINT OF NEW ARCHITECTURAL PRECAST CAPS. UNDER DUCT ALTERNATE #1 PROVIDE NEW SEALANT JOINT AT EACH NEW CUT HEAD JOINT IN THE REPAIRED WALL CAP.
- 32-01 NEW GRADE AT WALL. FURNISH AND PLACE SELECT FILL ON THE RIVER (EAST) SIDE TO CREATE A 10:1 SLOPE TOWARDS THE RIVER. SEE CIVIL SITE PLANS.
- 32-06 STAFF GAUGES AS SHOWN; PROVIDE 12"X12"X48" SECTIONS OF WHITE MARINE GRADE PVC GAUGE AS SHOWN AT EACH LOCATION. LETTERS ARE BLACK WITH BLACK MARKERS DENOTING 3" ELEVATION CHANGES AS SHOWN. INSTALL FLUSH AND PLUMB WITH WALL WITH STAINLESS STEEL SCREWS IN SLIGHTLY ENLARGED HOLES (TO ACCOMMODATE THERMAL EXPANSION). PROVIDE MARKERS WITH ELEVATION NOTATIONS AS SHOWN ON THE ELEVATIONS. SURVEY IN FOR CORRECT ELEVATION REFERENCE. STAFF GAUGES ARE PROVIDED BY STAFFGAUGES.COM 1-800-477-6134; OR EQUAL.

LEGEND:

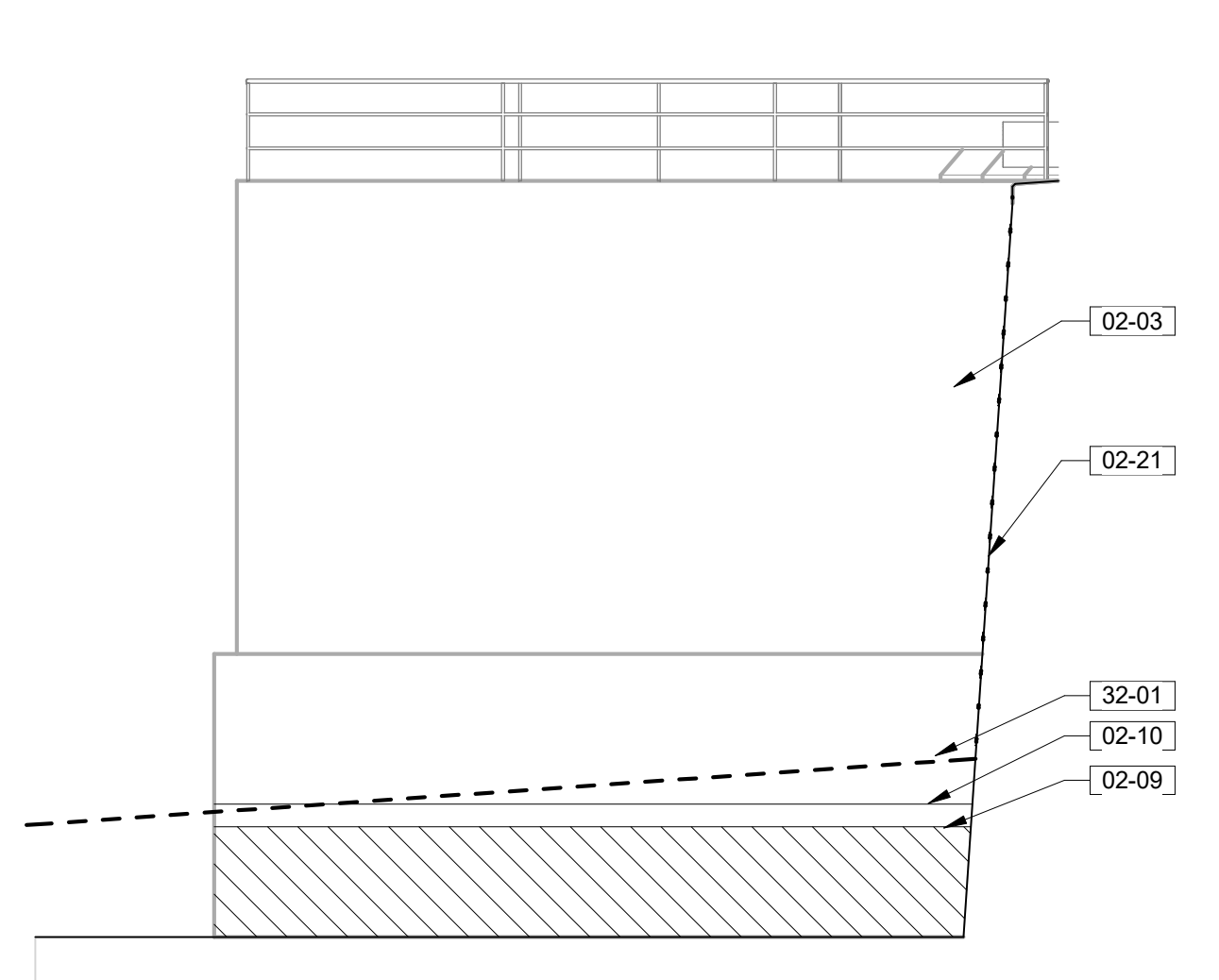
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- TYP TYPICAL
- AREA OF WALL EXCAVATION
- CONCRETE
- IRON OXIDE STAINING, SEE KEYNOTES
- APPROXIMATE LOCATION OF WALL CRACK
- EXISTING FOUNDATION
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- PROPOSED GRADE
- WALL CRACK (IN ELEVATION)
- WALL CRACK, NOTED TO SEEP BY VAMC (IN ELEVATION)
- WALL PANEL TAG



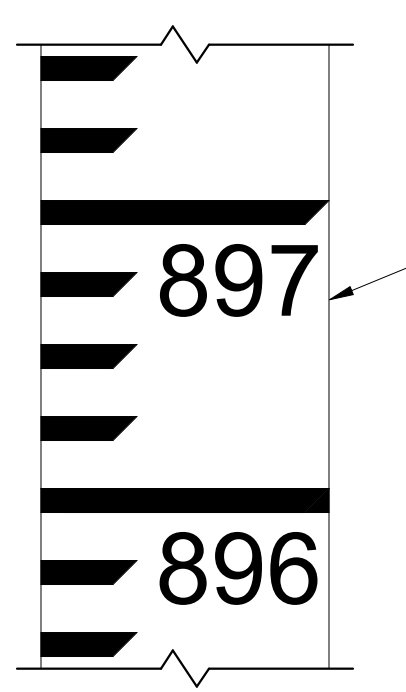
1 PUMP STATION SOUTH ELEVATION
3/16" = 1'-0"



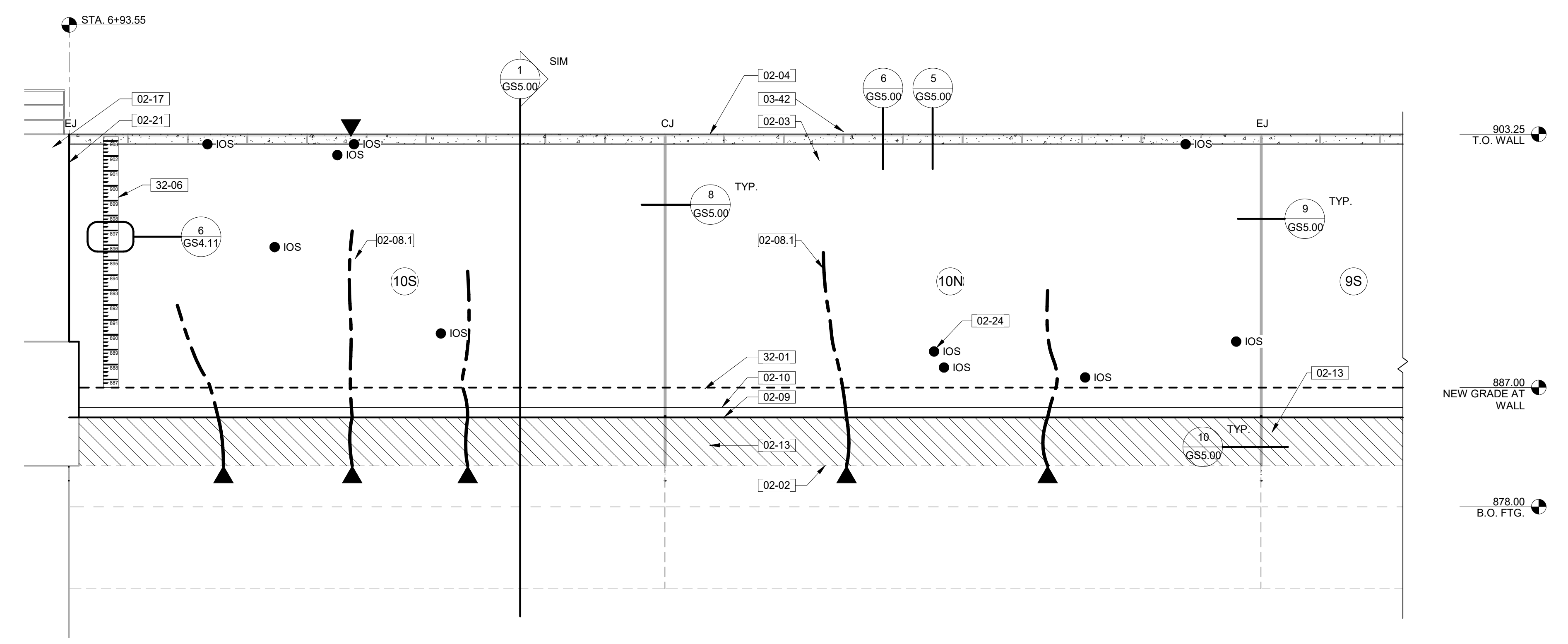
2 PUMP STATION EAST ELEVATION
3/16" = 1'-0"



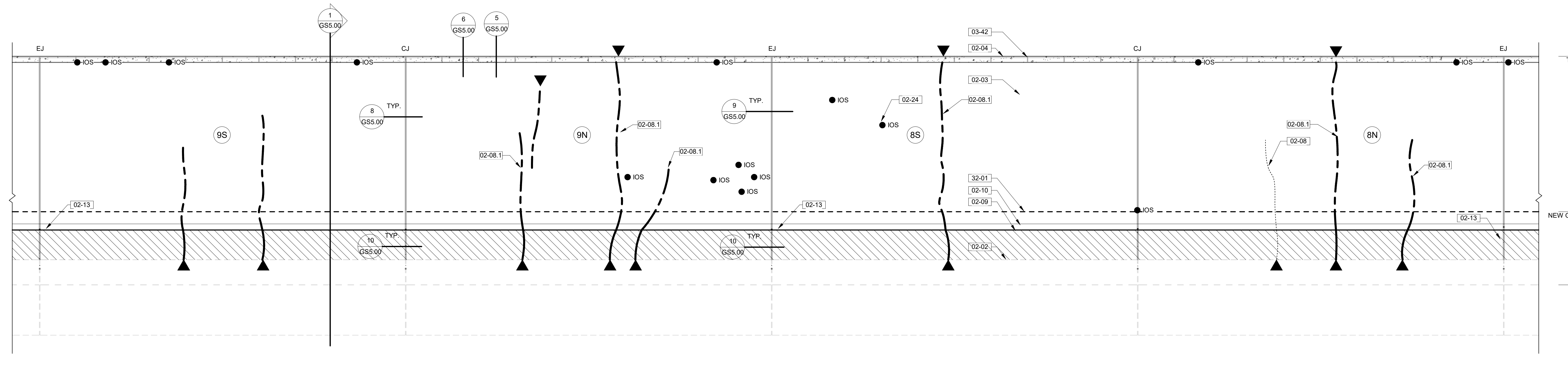
3 PUMP STATION NORTH ELEVATION
3/16" = 1'-0"



6 FLOOD LEVEL STAFF GAUGE STANDARD DETAIL
1 1/2" = 1'-0"



4 WALL ELEVATION - EAST - 10
3/16" = 1'-0"



5 WALL ELEVATION - EAST - 8
3/16" = 1'-0"

CONSTRUCTION DOCUMENTS

12/15/2020 12:10:52 PM L:\152481 AE Mello IDO Iowa_ND03 19 2481 ADD North Dakota Repair Flood Wall Levee System\Drawings\Architectural\2481_ND Repair Flood Wall Levee System.dwg

Revisions:	Date:

CONSULTANT	
ALBERTSON ENGINEERING INC. 3202 WEST MAIN STREET, SUITE C RAPID CITY, SOUTH DAKOTA 57702 PHONE (605) 343-9606	DJ&A, P.C. 3202 SOUTH RUSSELL STREET MISSOULA, MONTANA 59801 PHONE (406) 721-4320

ARCHITECT/ENGINEER OF RECORD	
	FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA 57701 PHONE (605) 342-9470

STAMP

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title WALL ELEVATIONS - EAST
Approved:

Phase CONSTRUCTION DOCUMENTS
--

Project Title REPAIR FLOOD WALL LEVEE SYSTEM	Project Number 437-19-104
Location FARGO VA HEALTH CARE SYSTEM	Building Number SITE
Issue Date DECEMBER 18, 2020	Checked JR
Drawn KZ	Drawing Number GS4.11
Dwg. 12 of 15	

GENERAL NOTES:

1. SHEET SIZE FOR PROPER SCALE IS 30X42. CONTRACTOR SHALL NOT SCALE DRAWINGS BUT SHALL REQUEST THE DESIRED DIMENSIONS FROM THE ARCHITECT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VISIT THE PROJECT AND VERIFY EXISTING CONDITIONS. COORDINATE DEMOLITION BETWEEN ALL TRADES. NOTIFY A/E IMMEDIATELY OF ANY CONFLICTS OR DISCREPANCIES. CONTRACTOR SHALL COORDINATE WORK ACTIVITIES AND EQUIPMENT ACCESS WITH OTHER ONGOING PROJECTS AT THE VAMC. SCHEDULE WORK ACTIVITIES TO MINIMIZE FACILITY AND CONSTRUCTION INTERRUPTIONS AS DIRECTED BY THE VAMC PROJECT ENGINEER.
3. SECURITY FENCE IS SHOWN AS A BASIC OUTLINE WHERE REQUIRED BY THIS WORK. WORK MAY REQUIRE ADJUSTMENT OF FENCING PERIMETER AS NEEDED. SECURITY FENCE ADJUSTMENT, LOCATION AND DURATION WILL REQUIRE THE WRITTEN APPROVAL OF THE PROJECT ENGINEER. SEE SPECIFICATIONS FOR TEMPORARY FENCING TO PROTECT SEED AND SOD AREAS DURING ESTABLISHMENT PERIOD.

SHEET SPECIFIC NOTES:

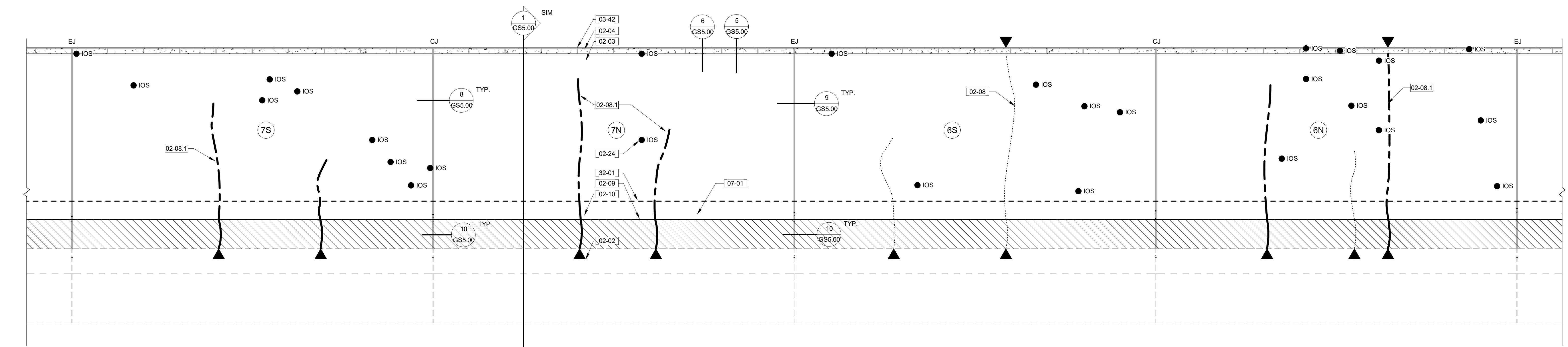
1. AT EACH PANEL JOINT AT RIVER SIDE, EXCAVATE TO TOP OF FOOTING BELOW, PRIOR TO JOINT REPLACEMENT BACKFILL WITH ENGINEERED FILL AND TOP SOIL TO ELEVATIONS SHOWN IN THE CIVIL DOCUMENTS.

KEYNOTES:

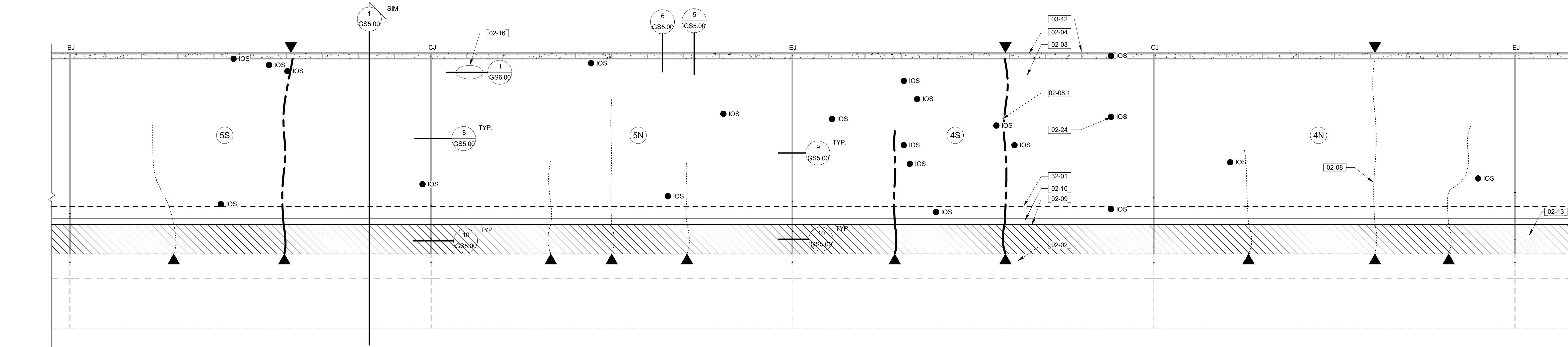
- 02-02 EXISTING CONCRETE FOOTINGS BELOW GRADE. TYPICAL.
- 02-03 EXISTING CONCRETE FLOOD WALLS. REMOVE EXISTING FINISHES. ALL SURFACES OF THE WALL STRUCTURE, TO SOUND, CLEAN CONCRETE. TYPICAL.
- 02-04 REMOVE EXISTING CONCRETE CAP. INSTALL NEW ARCHITECTURAL PRECAST CONCRETE CAP (BASE BID). UNDER DEDUCT ALTERNATE #1, REPAIR EXISTING CONCRETE CAP IN PLACE. SEE STRUCTURAL.
- 02-05 REMOVE EXISTING PYRAMIDAL CONCRETE CAPS.
- 02-08 REMOVE EXISTING CHAIN LINK FENCE.
- 02-08 TYPICAL WALL CRACK. FIELD VERIFY ACTUAL COURSE.
- 02-08.1 TYPICAL WALL CRACK NOTED TO LEAK BY VAMC STAFF AT HIGH WATER EVENTS; FIELD VERIFY ACTUAL COURSE. PROVIDE HIGH PRESSURE POLYURETHANE INJECTION FOR THE FULL HEIGHT OF THIS CRACK (INCLUDING CRACK EXTENSIONS BELOW GRADE AT RIVER SIDE). INSTALL PER MANUFACTURERS RECOMMENDATIONS. SEE SPECIFICATIONS.
- 02-09 EXISTING GRADE. TYPICAL.
- 02-10 EXPOSED CONCRETE FINISH. TOPICAL FINISH DOES NOT EXTEND TO GRADE.
- 02-13 EXCAVATE TO TOP OF FOOTING FOR JOINT REPLACEMENT AND WATERPROOF MEMBRANE INSTALLATION. TYPICAL.
- 02-16 AREA OF SIGNIFICANT CONCRETE FRACTURING OR DELAMINATION.
- 02-24 EXISTING IRON OXIDE STAINING. REMOVE AND GRIND TO SOUND SUBSTRATE. PATCH TO MATCH ADJACENT SURFACES. TYPICAL AT ALL LOCATIONS.
- 03-41 PYRAMIDAL PRECAST CONCRETE CAPS. SEE DETAIL 7/SS5.00
- 03-42 INSTALL NEW SEALANT JOINT AT EACH HEAD JOINT OF NEW ARCHITECTURAL PRECAST CAPS. UNDER DEDUCT ALTERNATE #1, PROVIDE NEW SEALANT JOINT AT EACH NEW CUT HEAD JOINT IN THE REPAIRED WALL CAP.
- 07-01 AT AREAS OF DEEPER CUT, VERIFY FULL HEIGHT OF MEMBRANE INSTALLATION.
- 32-01 NEW GRADE AT WALL. FURNISH AND PLACE SELECT FILL ON THE RIVER (EAST) SIDE TO CREATE A 10:1 SLOPE TOWARDS THE RIVER. SEE CIVIL SITE PLANS.
- 32-06 STAFF GAUGES AS SHOWN. PROVIDE 12"x12"x48" SECTIONS OF WHITE MARINE GRADE PVC GAUGE AS SHOWN AT EACH LOCATION. LETTERS ARE BLACK WITH BLACK MARKERS DENOTING 3/8" ELEVATION CHANGES AS SHOWN. INSTALL FLUSH AND PLUMB WITH WALL WITH STAINLESS STEEL SCREWS IN SLIGHTLY ENLARGED HOLES (TO ACCOMMODATE THERMAL EXPANSION). PROVIDE MARKERS WITH ELEVATION NOTATIONS AS SHOWN ON THE ELEVATIONS. SURVEY IN FOR CORRECT ELEVATION REFERENCE. STAFF GAUGES ARE PROVIDED BY STAFFGAUGES.COM 1-800-477-6134; OR EQUAL.

LEGEND:

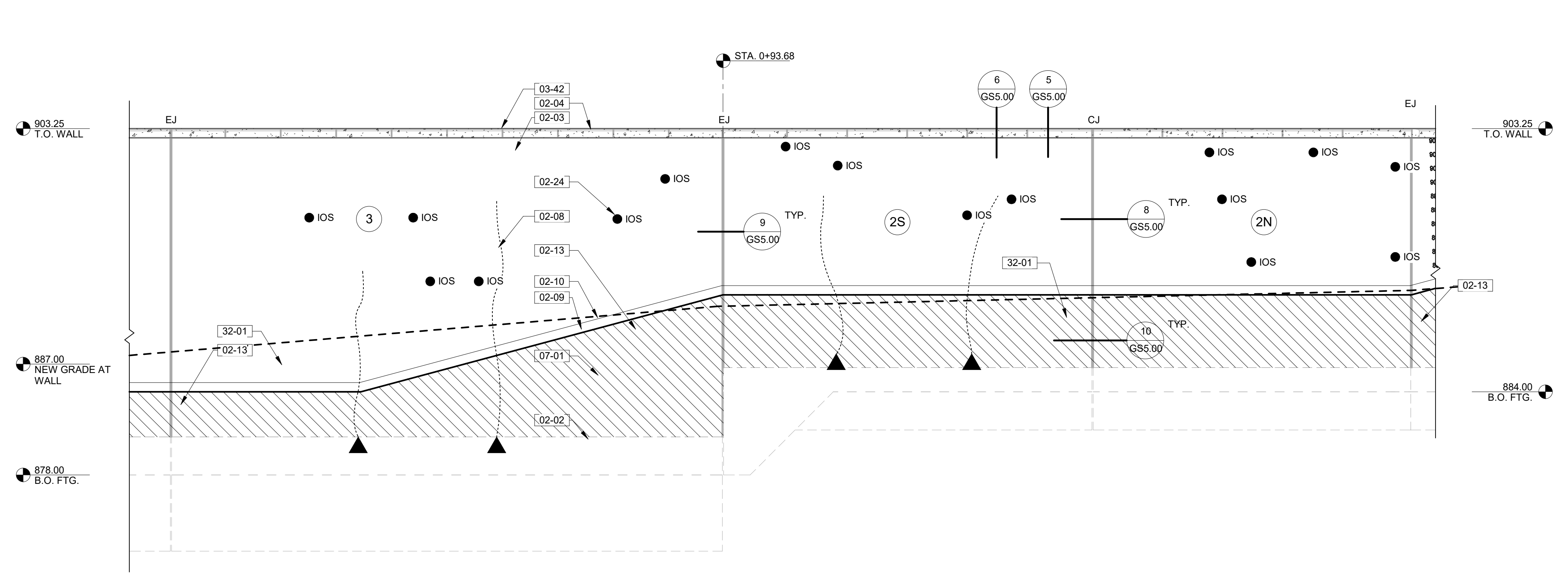
- CJ CONTRACTION JOINT
- EJ EXPANSION JOINT
- SIM SIMILAR
- TYP TYPICAL
- [Hatched Box] AREA OF CONCRETE DELAMINATION
- [Dotted Box] AREA OF LOW COVERAGE FOR REINFORCING STEEL
- [Diagonal Lines Box] AREA OF JOINT EXCAVATION
- [Stippled Box] CONCRETE
- IOS IRON OXIDE STAINING. SEE KEYNOTES
- ▼ APPROXIMATE LOCATION OF WALL CRACK
- EXISTING FOUNDATION
- - - EXISTING GRADE
- - - PROPOSED GRADE
- - - WALL CRACK (IN ELEVATION)
- - - WALL CRACK, NOTED TO SEEP BY VAMC (IN ELEVATION)
- # WALL PANEL TAG



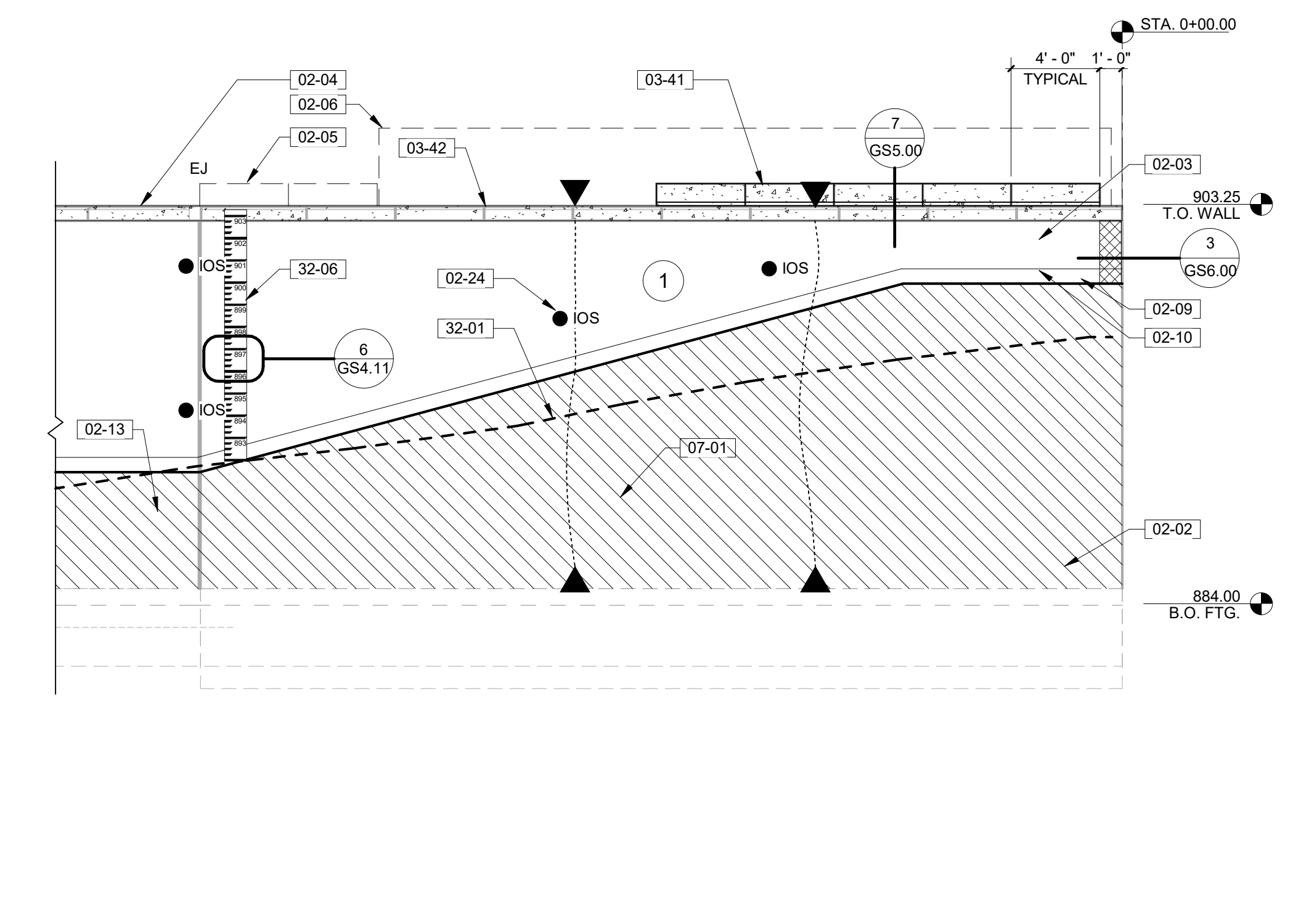
1 WALL ELEVATION - EAST - 6
3/16" = 1'-0"



2 WALL ELEVATION - EAST - 4
3/16" = 1'-0"



3 WALL ELEVATION - EAST - 2
3/16" = 1'-0"



4 WALL ELEVATION - EAST - 1
3/16" = 1'-0"

CONSTRUCTION DOCUMENTS

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Revisions:	Date:

CONSULTANT	
ALBERTSON ENGINEERING INC. 3202 WEST MAIN STREET, SUITE C RAPID CITY, SOUTH DAKOTA 57702 PHONE (605) 343-9606	
ARCHITECT/ENGINEER OF RECORD	
DJ&A, P.C. 3202 SOUTH RUSSELL STREET MISSOULA, MONTANA 59801 PHONE (406) 721-4320	

ARCHITECT/ENGINEER OF RECORD	
FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA 57701 PHONE (605) 342-9470	
STAMP	

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title	WALL ELEVATIONS - EAST
Approved:	

Phase	CONSTRUCTION DOCUMENTS
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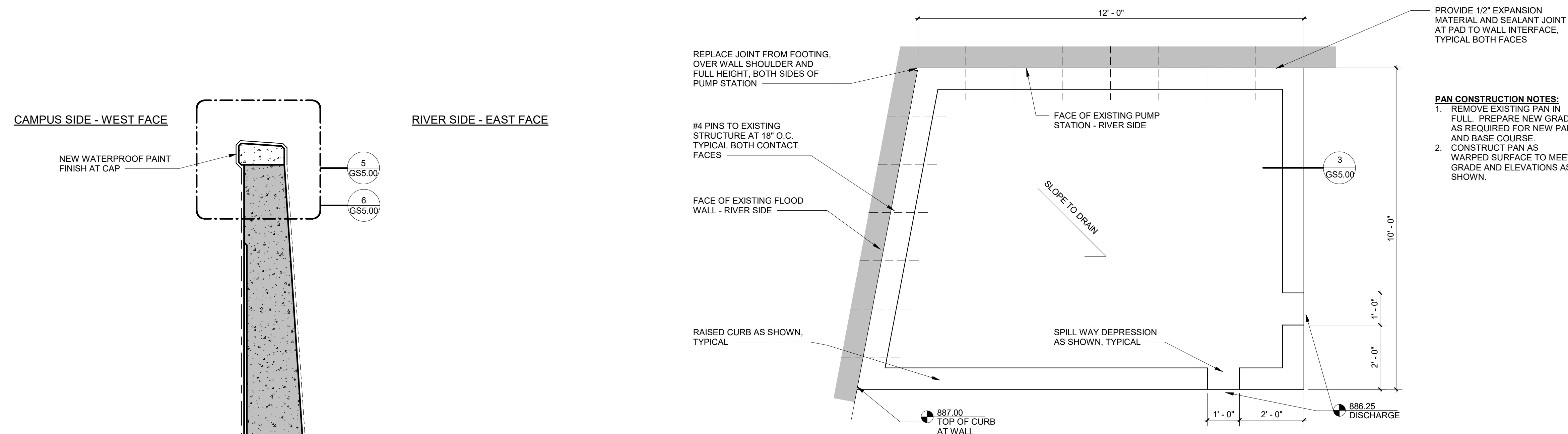
Project Title	REPAIR FLOOD WALL LEVEE SYSTEM	Project Number	437-19-104
Location	FARGO VA HEALTH CARE SYSTEM	Building Number	SITE
Issue Date	DECEMBER 18, 2020	Checked	JR
Drawn	KZ	Drawing Number	GS4.12
			Dwg. 13 of 15

GENERAL NOTES:

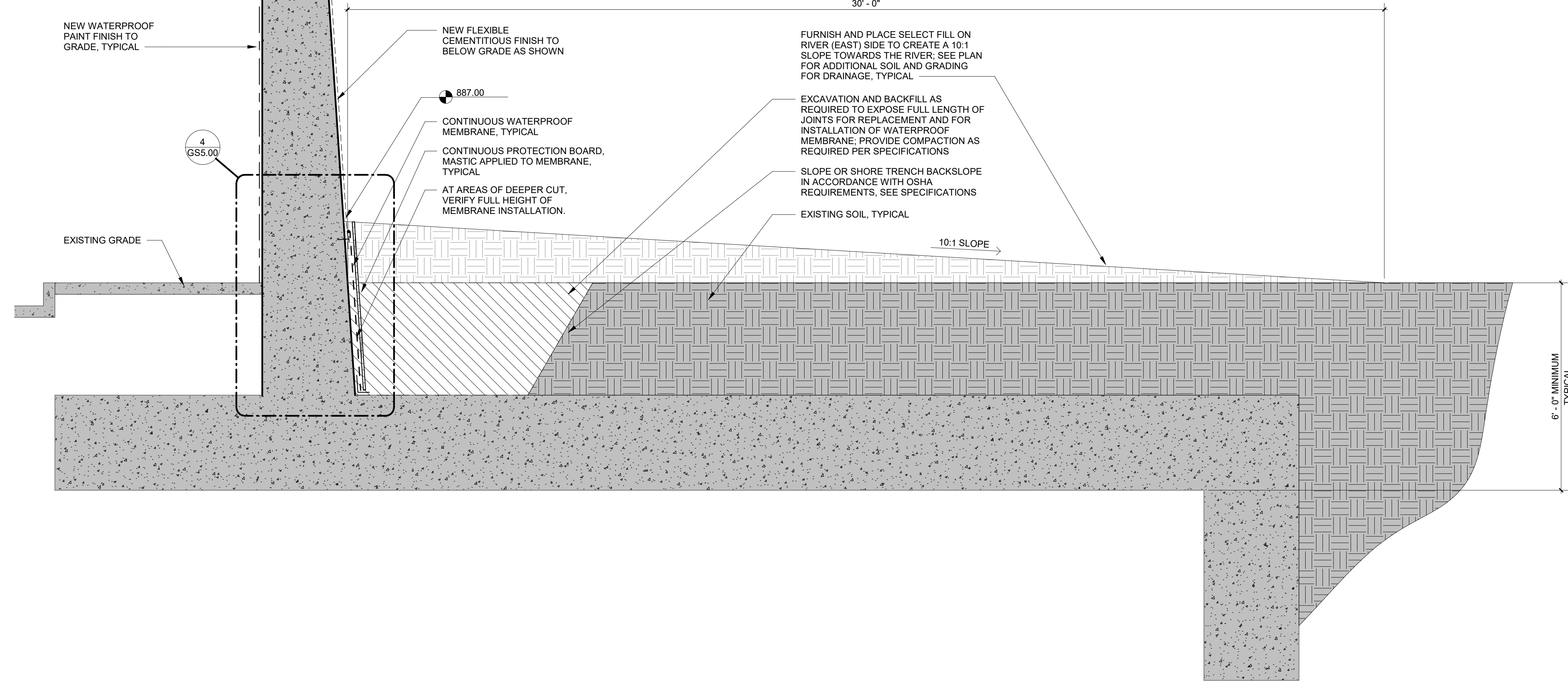
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LEGEND:

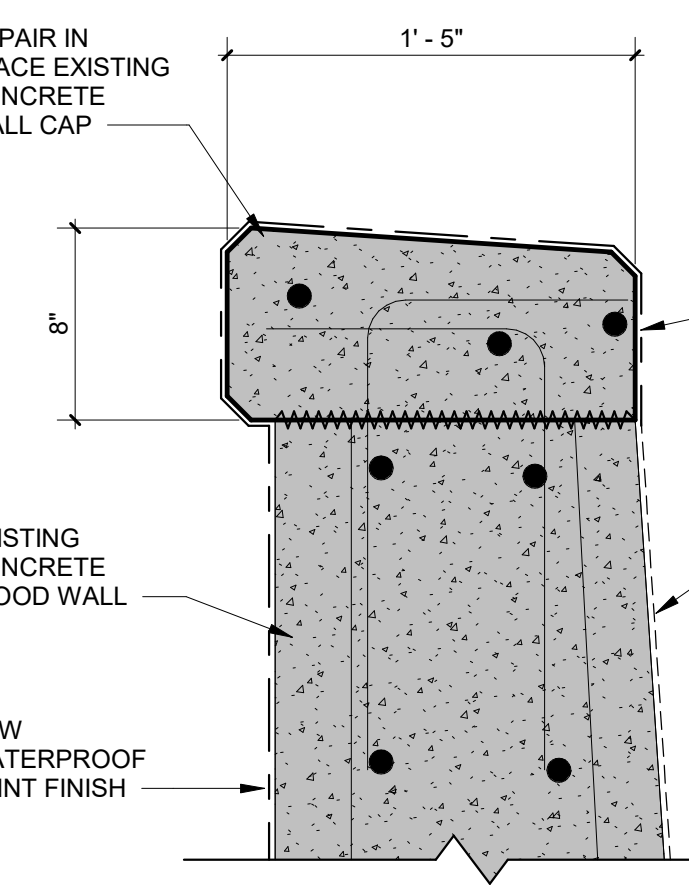
- EXISTING CONCRETE
- SELECT FILL, SEE SPECIFICATIONS
- EXISTING SOIL TO REMAIN
- EXISTING SOIL TO BE EXCAVATED FOR JOINT REPLACEMENT
- NEW WATERPROOF PAINT FINISH
- NEW FLEXIBLE CEMENTITIOUS FINISH
- NEW CONTINUOUS WATERPROOF MEMBRANE



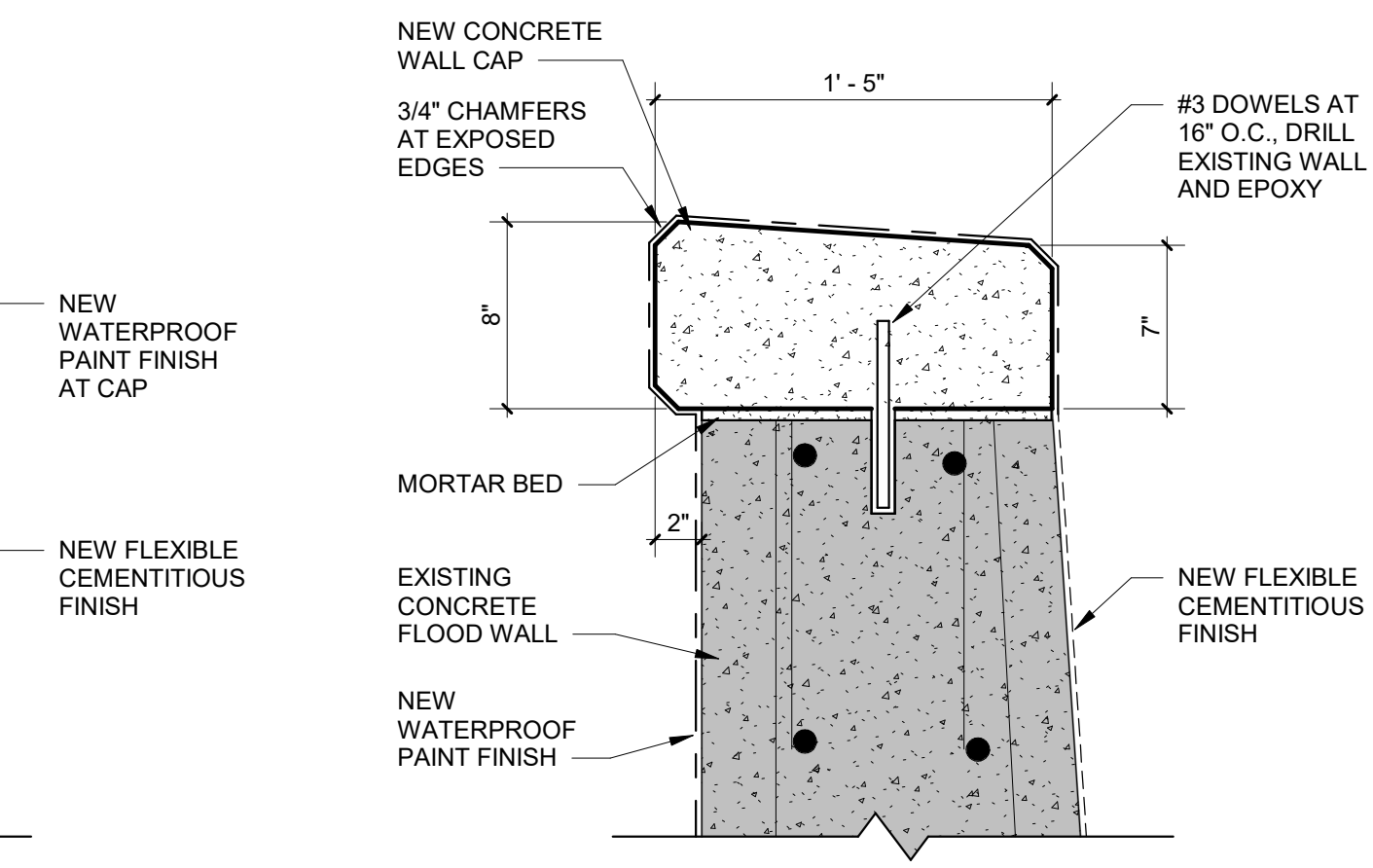
2 ENLARGED PLAN - SPLASH PAD REPLACEMENT
1/2" = 1'-0"



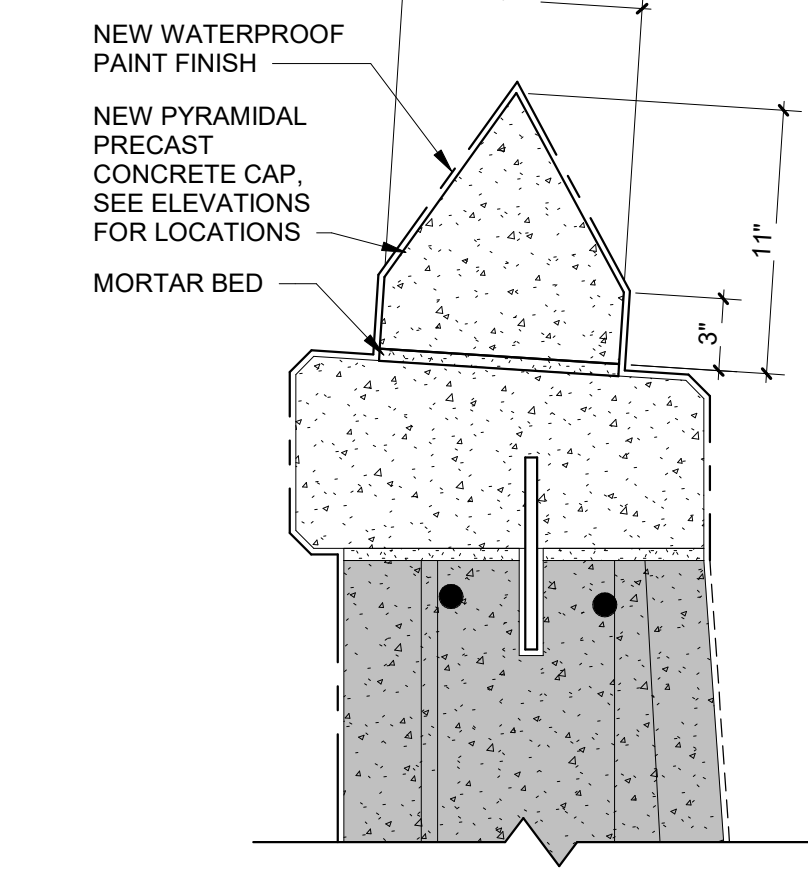
1 TYPICAL WALL SECTION
1/2" = 1'-0"



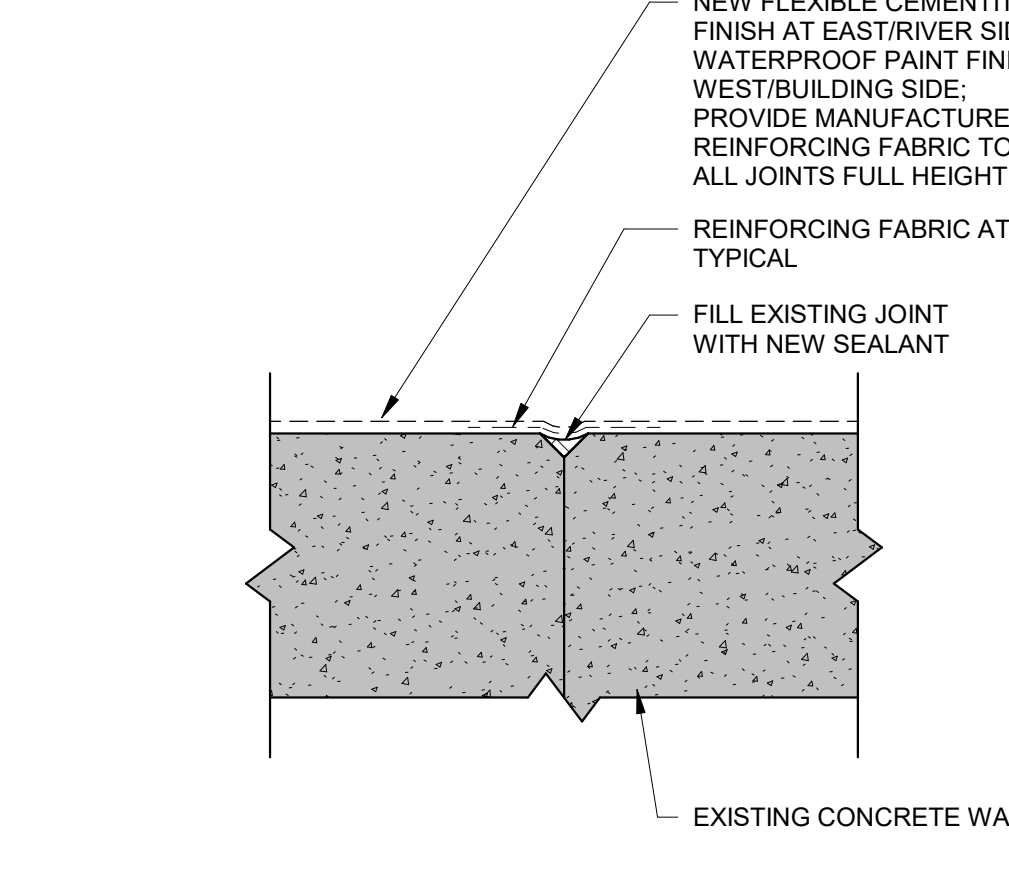
5 WALL CAP DETAIL - DEDUCT ALTERNATE #1
1 1/2" = 1'-0"



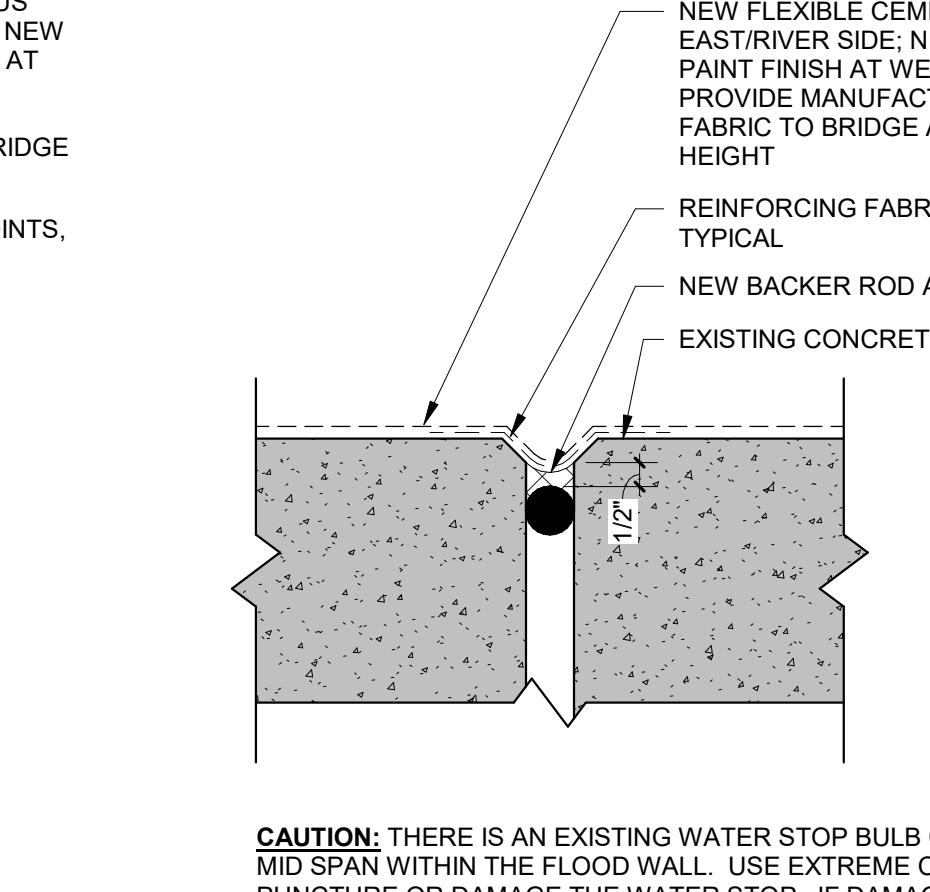
6 WALL CAP DETAIL - BASE BID
1 1/2" = 1'-0"



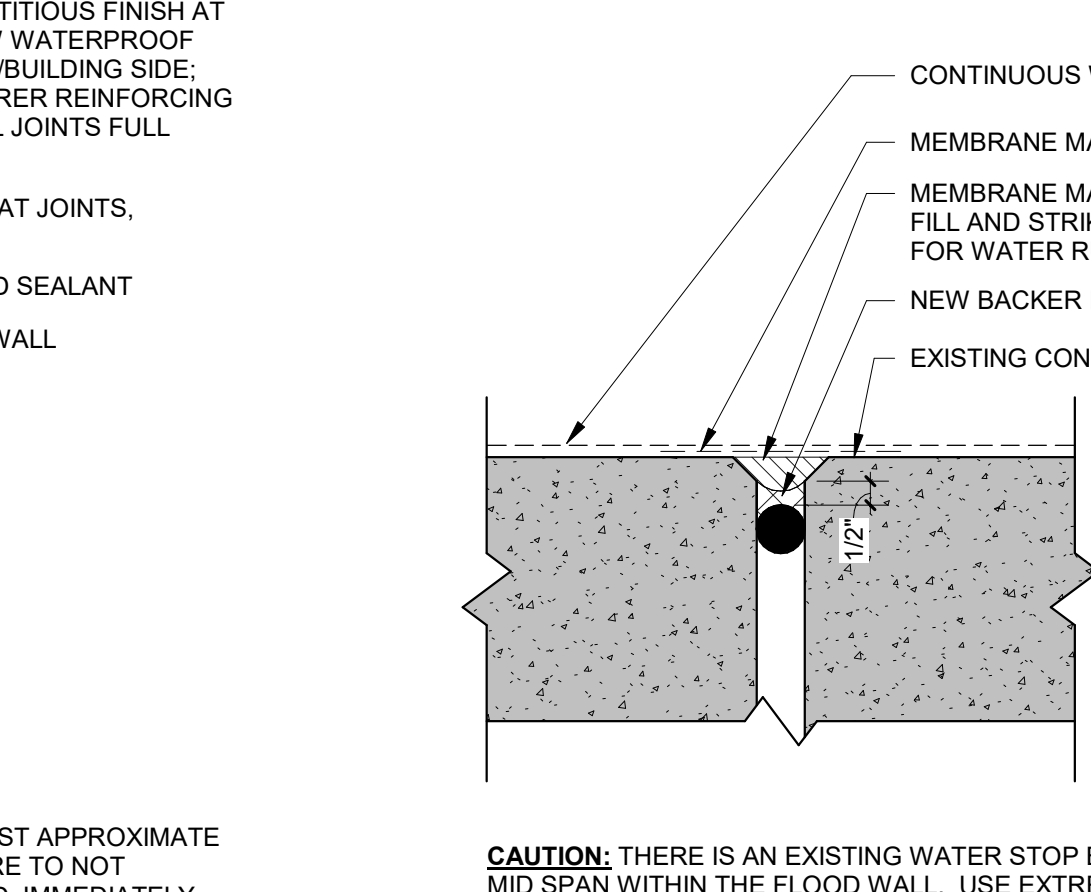
7 PRECAST PYRAMIDAL CAP DETAIL
1 1/2" = 1'-0"



8 JOINT TYPE A - CONTRACTION JOINT
3" = 1'-0"

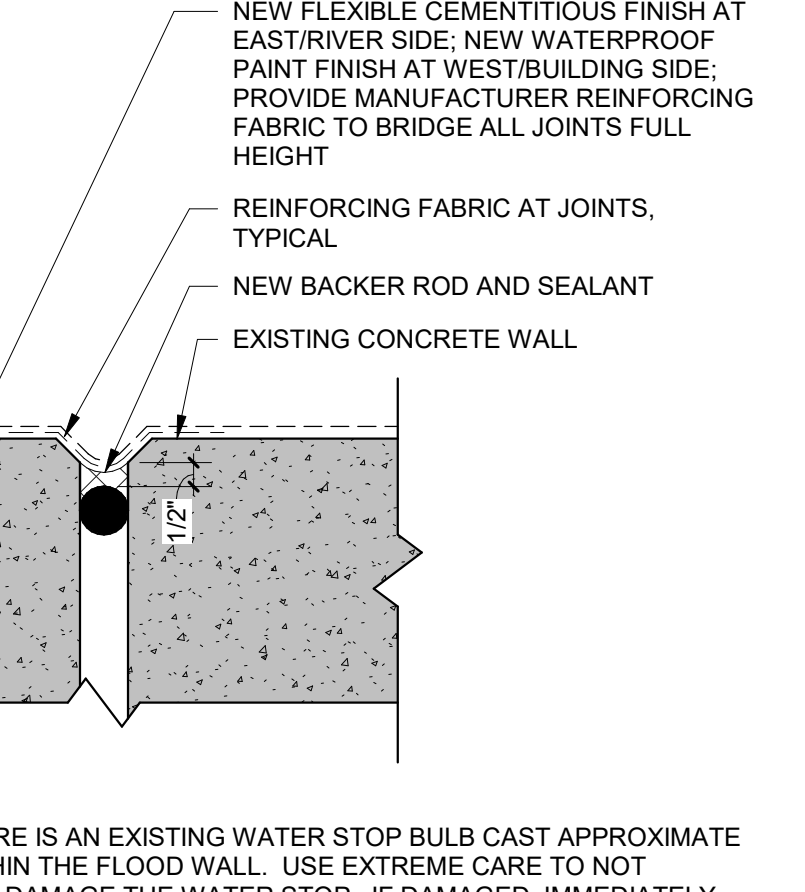


9 JOINT TYPE B - EXPANSION JOINT ABOVE GRADE
3" = 1'-0"

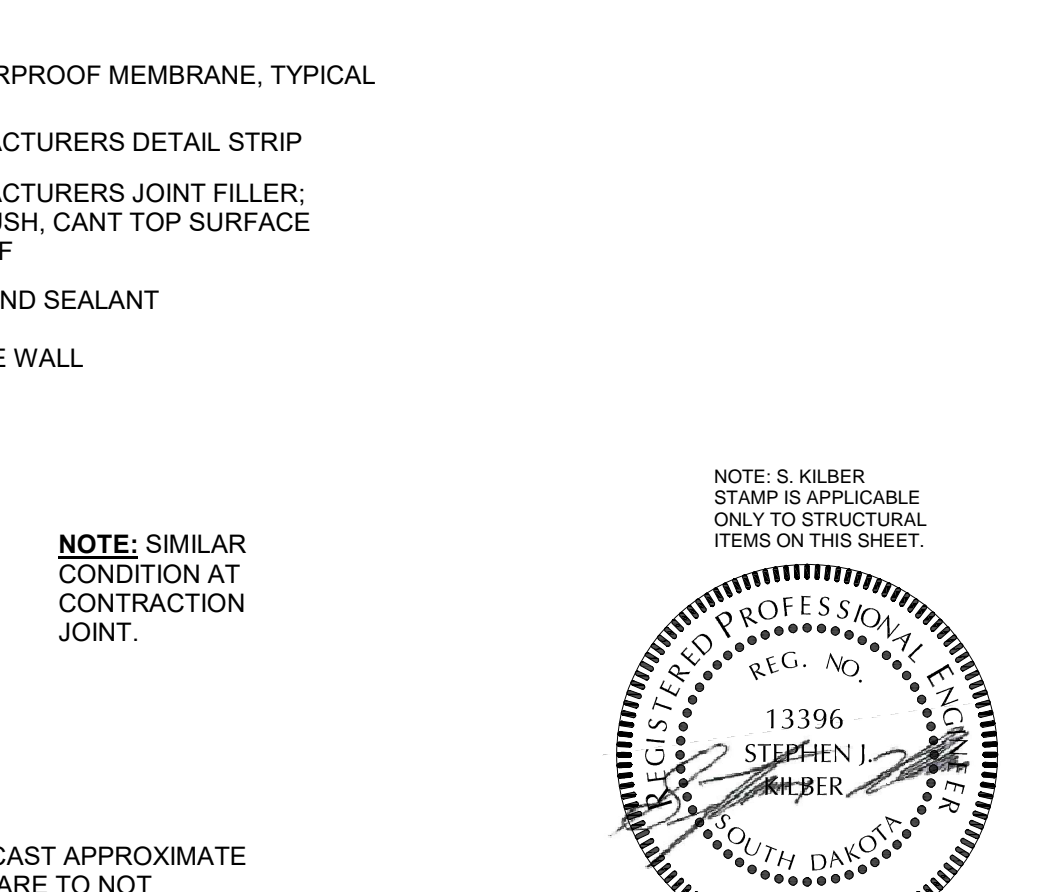


10 JOINT TYPE C - EXPANSION JOINT BELOW GRADE
3" = 1'-0"

4 FOUNDATION PROTECTION DETAIL
1 1/2" = 1'-0"



4 FOUNDATION PROTECTION DETAIL
1 1/2" = 1'-0"



10 JOINT TYPE C - EXPANSION JOINT BELOW GRADE
3" = 1'-0"

NOTE: SIMILAR CONDITION AT CONTRACTION JOINT.

NOTE: S. KILBERG STAMP IS APPLICABLE ONLY TO STRUCTURAL ITEMS ON THIS SHEET.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 13396
STEPHEN J. KILBERG
SOUTH DAKOTA
12/16/2020

CONSTRUCTION DOCUMENTS

Revisions:	Date:

CONSULTANT

ALBERTSON ENGINEERING INC.
3202 WEST MAIN STREET, SUITE C
RAPID CITY, SOUTH DAKOTA 57702
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FOURFRONT DESIGN, INC.
517 7TH STREET
RAPID CITY, SOUTH DAKOTA 57701
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STAMP

REGISTERED PROFESSIONAL ARCHITECT
REG. NO. 13396
STEPHEN J. KILBERG
SOUTH DAKOTA
12/16/2020

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title
WALL SECTIONS AND DETAILS

Approved: _____

Phase
CONSTRUCTION DOCUMENTS

Project Title
REPAIR FLOOD WALL LEVEE SYSTEM

Project Number
437-19-104

Building Number
SITE

Location
FARGO VA HEALTH CARE SYSTEM

Issue Date
DECEMBER 18, 2020

Checked
JR

Drawn
KZ

Drawing Number
GS5.00

Dwg. 14 of 15

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GENERAL NOTES:

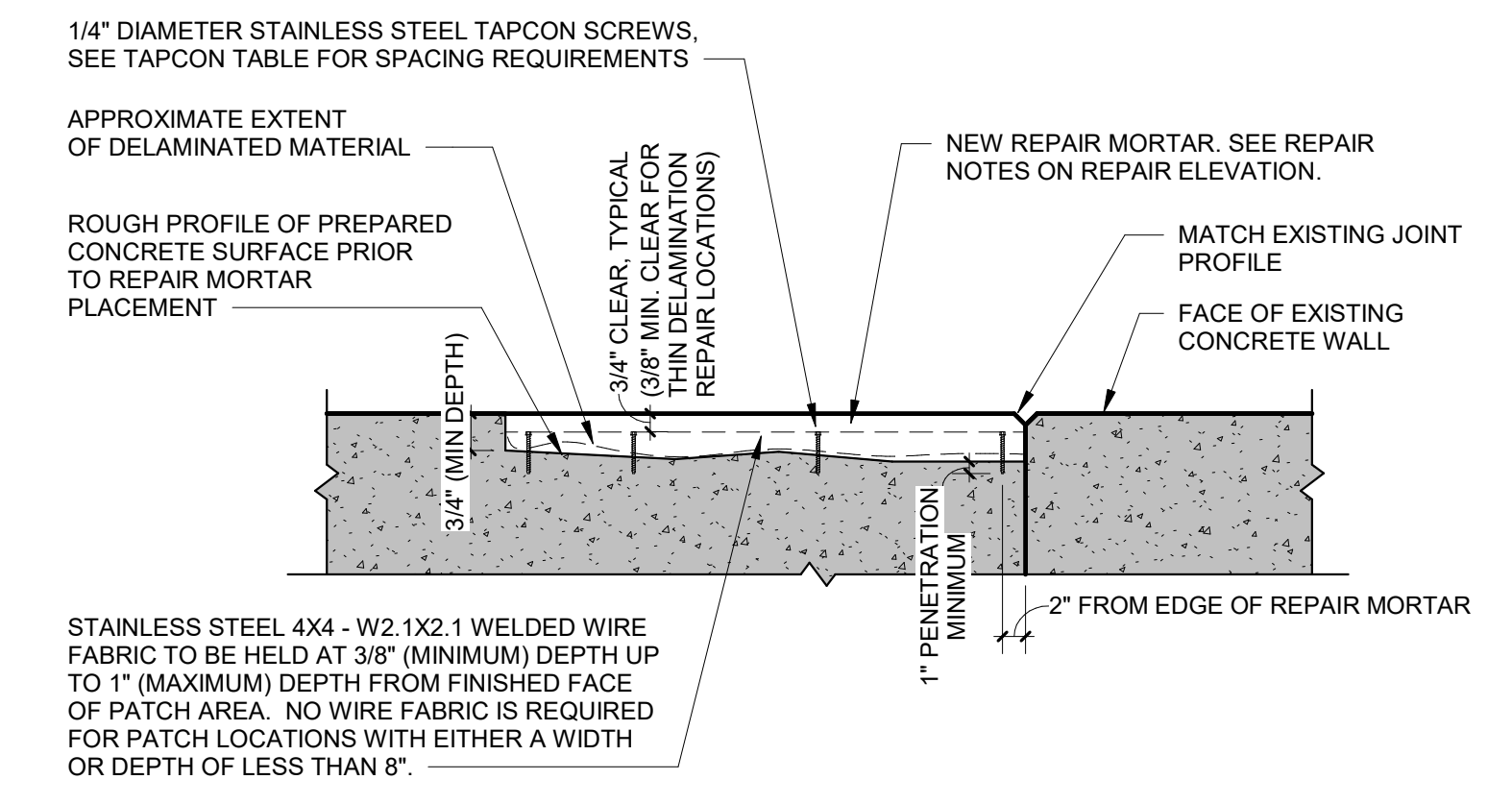
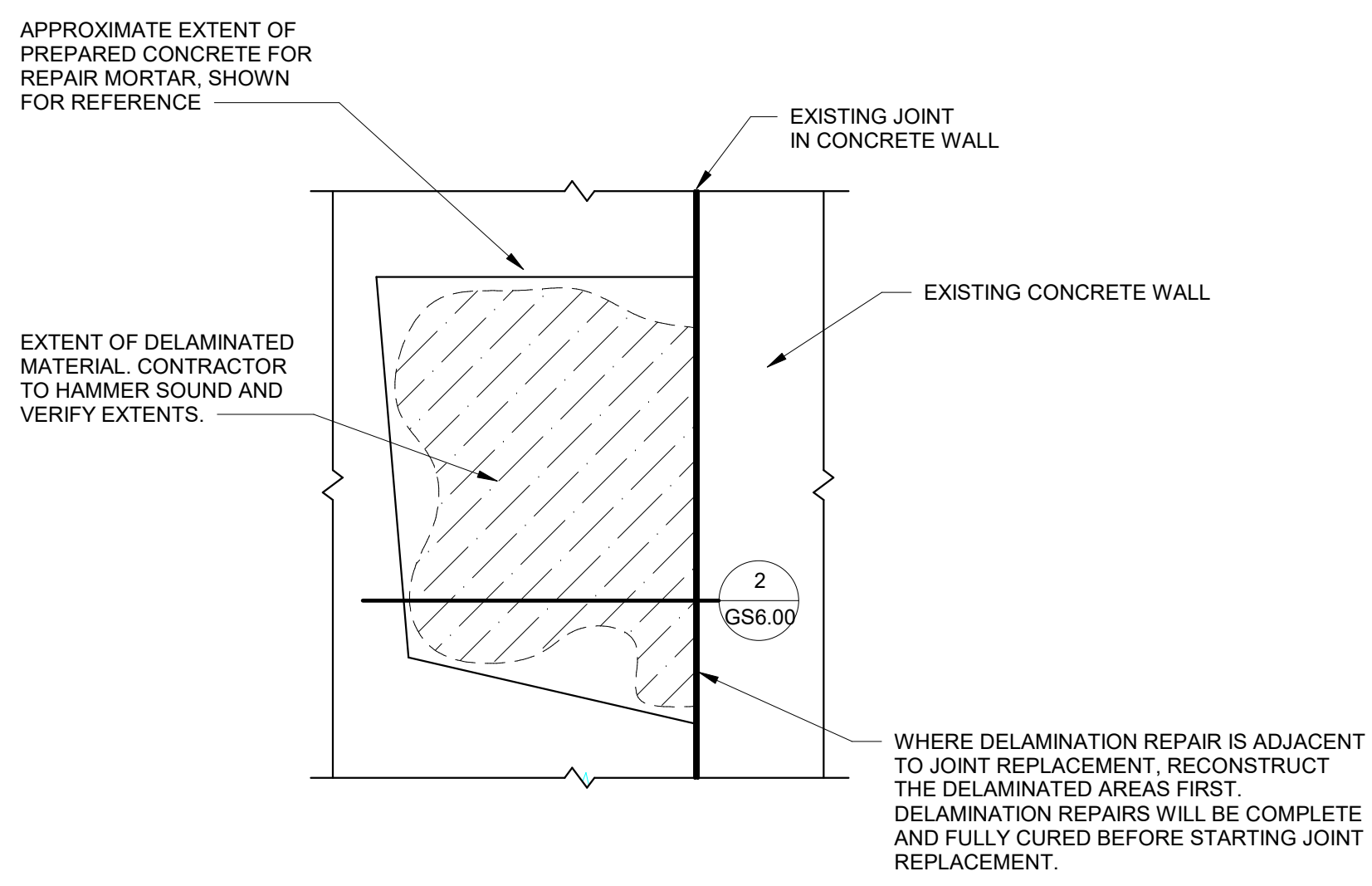
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PATCH SIZE	TAPCON SPACING
LESS THAN 12"X12"	8" C.C. EACH WAY
IN BETWEEN	12" C.C. EACH WAY
GREATER THAN 24"X24"	16" C.C. EACH WAY

NOTE: FOR ANY PATCH LOCATIONS WITH A DEPTH OR WIDTH LESS THAN 8", A SINGLE ROW OF STAINLESS STEEL TAPCONS CAN BE INSTALLED AT 8" C.C. THESE TAPCONS ARE TO BE CENTERED WITHIN THE NARROW DIMENSION OF THE PATCH AREA.

NOTE: THERE IS APPROXIMATELY 30 S.F. OF DELAMINATED WALL NOTED ON THIS PLAN. GENERAL CONTRACTOR IS TO VERIFY S.F. AND QUANTITIES OF MATERIALS NEEDED. IF ADDITIONAL AREAS OF DELAMINATION ARE DISCOVERED, REPORT FINDINGS TO THE VA PROJECT ENGINEER IMMEDIATELY.

- REPAIR NOTES:**
- CONTRACTOR IS TO HAMMER SOUND THE EXISTING CONCRETE WALL TO FIND THE EXTENTS OF THE DELAMINATED MATERIAL. IF A SUSPECT AREA IS LOOSE OR SOUNDS HOLLOW, REMOVE AND REPAIR AS FOLLOWS.
 - SAW-CUT OR CHIP ENTIRE PERIMETER TO MINIMUM 3/4" DEPTH AND REMOVE DELAMINATED MATERIAL USING SMALL CHIPPING HAMMERS (15LBS OR LESS). PROVIDE SQUARE EDGES AS MUCH AS POSSIBLE AND AVOID FEATHERED EDGES AT THE EXTERIOR PERIMETER OR ROUNDED CORNERS AT THE INTERIOR EDGES OF THE AREA TO BE REPAIRED.
 - IF EXISTING REINFORCEMENT IS ENCOUNTERED DURING THE DELAMINATION REMOVAL PROCESS, DO NOT CUT OR DAMAGE THE REINFORCING BARS. UNDERCUT EXISTING EXPOSED REINFORCING BY 3/4" FOR BARS THAT HAVE ONE-HALF OR MORE OF THEIR DIAMETER EXPOSED. REMOVE ANY SURFACE CORROSION OR SCALING FROM THE REINFORCEMENT PRIOR TO THE EPOXY PATCH INSTALLATION. FOLLOW THE CLEANING OPERATIONS, INSPECT REINFORCING TO DETERMINE DEGREE OF SECTION LOSS. IF LENGTHS OF REINFORCING ARE DETERMINED TO HAVE LOST MORE THAN 25% OF THEIR FULL (NOMINAL) WIDTHS, CONTACT THE CONTRACTING OFFICER PRIOR TO CONTINUING.
 - AFTER REMOVAL OF DELAMINATED MATERIAL BY HAND CHIPPING, REMOVE FINE MICRO-FRACTURED (BRUISED) MATERIAL, LOOSELY BONDED SURFACES, AND CORROSION FROM REINFORCEMENT BY ABRASIVE BLASTING OR HIGH-PRESSURE WATER EROSION. AFTER SURFACE PREPARATION IS COMPLETE, THE AGGREGATE SHOULD APPEAR CLEAN AND CRISP AND PROTRUDE ABOVE THE PASTE LINE A MINIMUM OF 1/4". FINAL SURFACE PROFILE MUST MEET CSP 10 CHARACTERISTICS AS DEFINED IN THE INTERNATIONAL CONCRETE REPAIR INSTITUTE (ICRI) GUIDELINE NO. 310.2R-2013. SEE FIGURES A AND B BELOW.
 - IF ANY REINFORCEMENT IS ENCOUNTERED AS PART OF REMOVING THE DELAMINATED MATERIAL, DO NOT CUT THE EXISTING REINFORCING. UNDERCUT THE CEMENTITIOUS MATERIAL AROUND THE BAR BY 3/4" FOR BARS THAT HAVE ONE-HALF OR MORE OF THEIR DIAMETER EXPOSED.
 - CONTRACTOR TO CLEAN ANY EXPOSED REINFORCEMENT OF RUST, SCALING OR CORROSION. REPAIR MORTAR TO BE EITHER MASTERMATCO S-4893 OR MASTERMATCO N-400 OR APPROVED EQUAL. TROWEL APPLY THE REPAIR MORTAR IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. MAXIMUM LIFT TO BE 2" IN DEPTH.
 - WHERE A BONDING AGENT IS RECOMMENDED BY THE REPAIR MORTAR MANUFACTURER OR REQUIRED AS PART OF A SUBSTITUTED EPOXY REPAIR MORTAR, IT SHALL BE APPLIED OVER THE PREPARED CONCRETE SURFACE PRIOR TO THE REPAIR MORTAR PLACEMENT. THE BONDING AGENT APPLICATION AND TIME GAP TO THE REPAIR MORTAR APPLICATION SHALL BE DONE BY STRICT ACCORDANCE OF THE MANUFACTURER'S RECOMMENDATIONS.
 - APPLY CURING COMPOUND OVER THE PATCH PER THE MANUFACTURER'S INSTRUCTIONS. CURING COMPOUND TO MEET THE REQUIREMENTS OF ASTM C1315 AND SHALL BE A PRODUCT RECOMMENDED BY THE REPAIR MORTAR MANUFACTURER.
 - WALL ELEVATIONS SHOW SUSPECT DELAMINATED AREAS AS DISCOVERED BY THE DESIGN TEAM. FOR BIDDING PURPOSES, GENERAL CONTRACTOR TO DEVELOP DELAMINATION REPAIRS BASED ON A 30 S.F. AREA. CONTRACTOR TO ALSO PROVIDE UNIT PRICE OF DELAMINATION REPAIR TO ALLOW FOR CONTRACT NEGOTIATION IF OTHER DELAMINATIONS ARE FOUND DURING CONSTRUCTION.



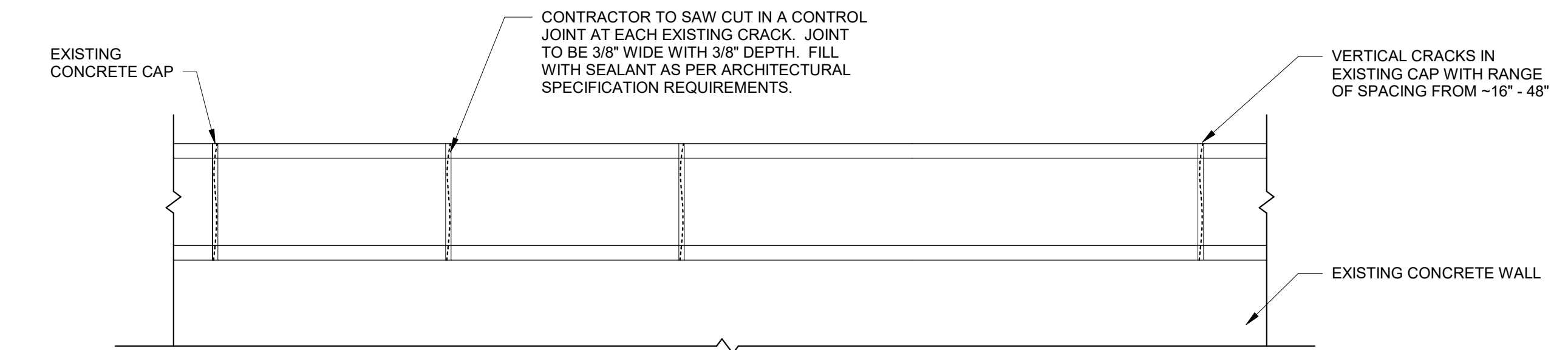
2 CONCRETE REPAIR DETAILS
3/4" = 1'-0"



FIGURE A
CSP 10 SURFACE CHARACTERISTICS - SURFACE PREPARED USING HANDHELD CONCRETE BREAKER FOLLOWED BY ABRASIVE BLASTING

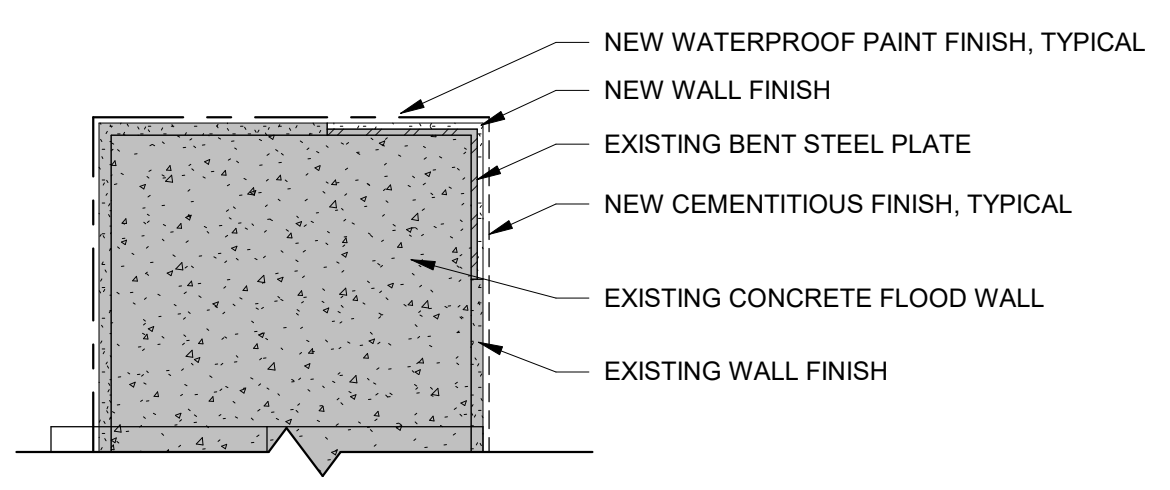


FIGURE B
CSP 10 SURFACE CHARACTERISTICS - SURFACE PREPARED USING HIGH-PRESSURE WATER JETTING



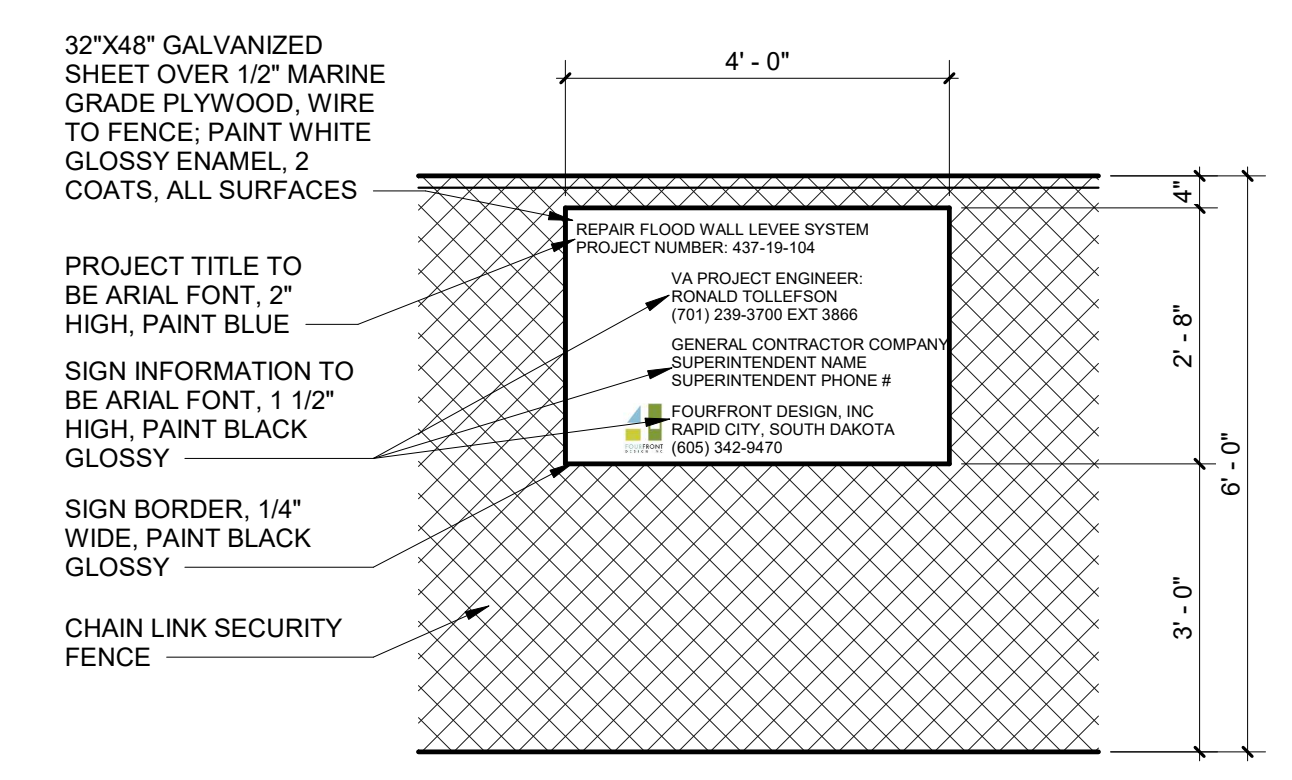
5 EXISTING WALL CAP REPAIR ELEVATION - DEDUCT ALTERNATE #1
1 1/2" = 1'-0"

1 ENLARGED DELAMINATED CONCRETE ELEVATION
3/4" = 1'-0"



3 END OF WALL DETAIL
1 1/2" = 1'-0"

NOTE: PROVIDE TERMINATION OF PAINT FINISHES AT SOUTH END SAME AS THIS DETAIL.



4 CONSTRUCTION PROJECT SIGN
1/2" = 1'-0"

CONSTRUCTION DOCUMENTS

Revisions: _____ Date: _____	CONSULTANT ALBERTSON ENGINEERING INC. 3202 WEST MAIN STREET, SUITE C RAPID CITY, SOUTH DAKOTA 57702 PHONE (605) 343-9606	DJ&A, P.C. 3202 SOUTH RUSSELL STREET MISSOULA, MONTANA 59801 PHONE (406) 721-4320	ARCHITECT/ENGINEER OF RECORD FOURFRONT DESIGN, INC. 517 7TH STREET RAPID CITY, SOUTH DAKOTA 57701 PHONE (605) 342-9470	STAMP 	Office of Construction and Facilities Management U.S. Department of Veterans Affairs	Drawing Title STRUCTURAL DETAILS	Phase CONSTRUCTION DOCUMENTS	Project Title REPAIR FLOOD WALL LEVEE SYSTEM	Project Number 437-19-104
	Approved: _____	Location FARGO VA HEALTH CARE SYSTEM	Issue Date DECEMBER 18, 2020	Checked SK	Drawn KZ	Drawing Number GS6.00	Dwg. 15 of 15		

12/15/2020 12:00:54 PM
 L:\10-2411 AE-Info\IDD Iowa_ID003 19 2481 A01 North Dakota Repair Flood Wall Levee System\Drawings\1-ND Repair Flood Wall Levee System.dwg