1W

INDEX OF SHEETS

STANDARDS

280001 TEMPORARY EROSION CONTROL SYSTEMS
515001 NAME PLATE FOR BRIDGES

STATE OF ILLINOIS
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF WATER RESOURCES

MULTI–PURPOSE DAM PROJECT – PHASE 3
PEDESTRIAN BRIDGE OVER CANOE AND FISH BYPASS CHANNEL
YORKVILLE DAM – FOX RIVER

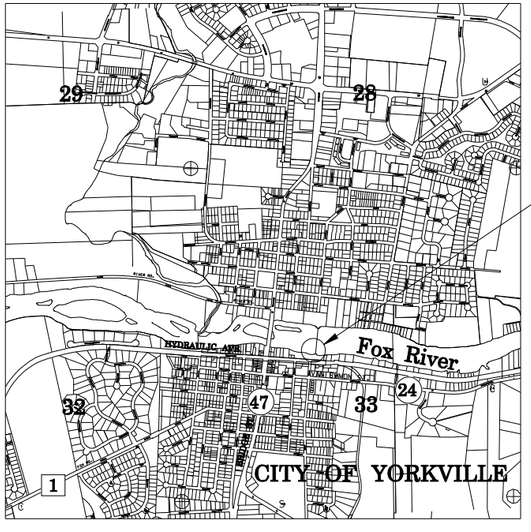
YORKVILLE, ILLINOIS
KENDALL COUNTY

FR–430

2011

REGIONAL MAP

R. 7 E.

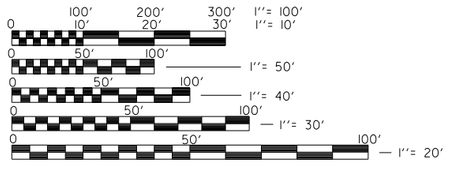


Project Location

LOCATION MAP

0 .25 .50 .75 1 mile

Scale



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

Ted Montrey 2/10/11
ILLINOIS REGISTERED STRUCTURAL ENGINEER NO. 081-005450
LICENSE EXPIRES 11-30-12

Ted Montrey 2/10/11
ILLINOIS REGISTERED PROFESSIONAL ENGINEER NO. 062-049591
LICENSE EXPIRES 11-30-11

STATE OF ILLINOIS · TED M. MONTREY 081-005450 · SPRINGFIELD, IL · LICENSED STRUCTURAL ENGINEER

TED M. MONTREY 49591 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

APPROVED BY _____ DATE 2-10-11
ACTING DIRECTOR

C:\OwrProj\mpt\Projects\Yorkville Dam Phase 3\Plans DGN\Summary of Quantities and General Notes.dgn
2/14/2011 5:12:41 PM
Designed By TMM Checked By JJF
Drawn By JJF Checked By TMM

SUMMARY OF QUANTITIES

CODE NO.	PAY ITEM	UNIT	QUANTITY
28000400	PERIMETER EROSION BARRIER	FOOT	85
42400300	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	SQ FT	48
50200100	STRUCTURE EXCAVATION	CU YD	30
50300225	CONCRETE STRUCTURES	CU YD	17
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	100
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4,300
*50900805	PEDESTRIAN RAILING	FOOT	40
51500100	NAME PLATES	EACH	1
51602000	PERMANENT CASING	FOOT	34
51603000	DRILLED SHAFT IN SOIL	CU YD	3.1
51604000	DRILLED SHAFT IN ROCK	CU YD	1.2
58700200	BRIDGE SEAT SEALER	SQ FT	21
*67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	6
67100100	MOBILIZATION	L SUM	1
*X0322508	PEDESTRIAN TRUSS SUPERSTRUCTURE	SQ FT	1,294
*XX003949	CONSTRUCTION STAKING	L SUM	1
*	SEEDING, MULCHING AND FERTILIZING	ACRE	0.01
*	STONE FACE FINISH	SQ FT	199
*	RAILING REMOVAL	FOOT	16
*	REMOVE AND RELOCATE EXISTING RAILING	FOOT	23
*	GAGE STATION WALKWAY	L SUM	1
*	WOOD INFORMATION SIGNS	EACH	2
*	BRIDGE LIGHTING	L SUM	1
*	DEBRIS DEFLECTOR	L SUM	1

* INDICATES NON-STANDARD ITEM COVERED BY SPECIAL PROVISION

GENERAL NOTES

1. All elevations refer to N.G.V.D. (National Geodetic Vertical Datum) 1929. All coordinates are NAD 1983 with 1986 Adjustment.
2. The Contractor shall furnish, erect, and when directed by the Engineer, completely remove two construction signs (see Standard Sheet). The location of the signs shall be determined by the Engineer in the field.
3. All lateral drainage that exists prior to construction shall be restored as shown on the plans and as directed by the Engineer. Unless otherwise specified all costs of restoration shall be considered included in the Contract and no additional compensation will be allowed.
4. Prior to the beginning of work in the vicinity of utilities, the Contractor shall contact the respective owners as shown on the plans and schedule work so as not to interfere with required adjustments.
5. With the exception of those utilities designated on the plans to be adjusted by the Contractor, all existing utilities affected by the construction operations shall be adjusted by others. Utilities which do not require adjustments shall be protected and not disturbed. All cost of protection shall be incidental to the Contract, and no additional compensation will be allowed.
6. All construction operations shall be contained within the easement area or work limits as indicated on the plans. It shall be the full responsibility of the Contractor to secure all rights of ingress and egress to said Right - of - Way including the satisfactory protection and restoration of property as required in Art. 107.20 and 107.23 of the Standard Specifications.
7. The Contractor shall call J.U.L.I.E. (800-892-0123) for the location of existing utilities 48 hours prior to beginning construction.
8. Field welding of construction accessories will not be permitted to the bottom flange at floor beams or the bottom truss chords. Field welding in other areas will be permitted only when approved by the Engineer.
9. The main load carrying members subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the truss bottom chords and diagonals and the floor beam tension flanges and webs and all splice plate material except fill plates.
10. Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.
11. Plan dimensions and details relative to existing structures have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
12. Bridge Seat Sealer shall be applied to the seat area of the south abutment and the corbel of the north abutment.
13. All timber members shall meet the requirements of Section 1007 of the Standard Specifications.
14. The Contracator shall coordinate work activities with the Contractor who is onsite completing the previous phase of construction.

UTILITY REFERENCE TABLE

J.U.L.I.E.	Call 48 hours prior to construction	(800) 892-0123
City of Yorkville Water & Sewer	Eric Dhuse, Director of Public Works 800 Game Farm Road Yorkville, IL 60560	(630) 553-4370
Electricity	Commonwealth Edison	(800) 334-7661
Telephone/SBC	John Evers, Plan Engineer 40 S. Mitchell Court Addison, IL 60101	(630) 620-3897
Gas	Monty Johns Nicor Gas	(815) 433-3850 Ext.244

STANDARD SYMBOLS

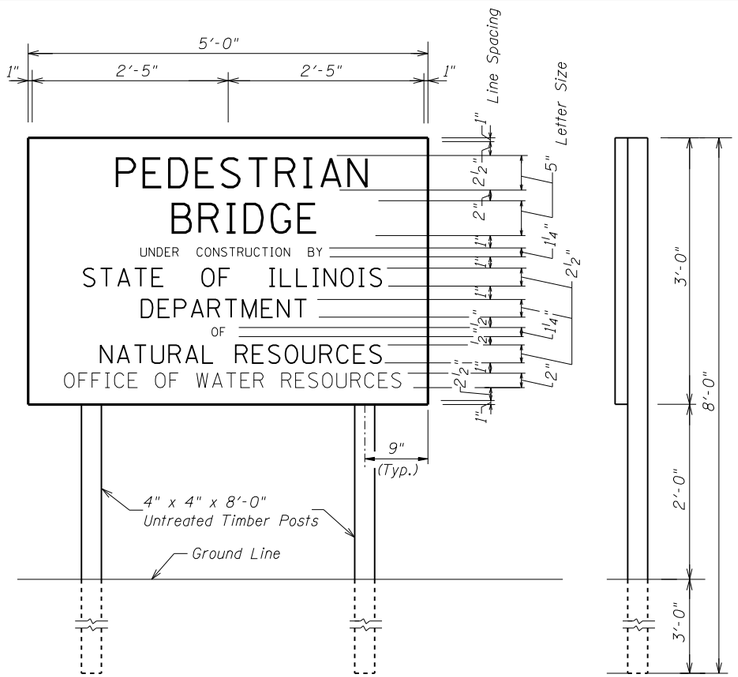
- Center Line
- Property Line
- Existing Right of Way
- Proposed Right of Way
- Permanent Easement (Perm. Ease.)
- Temporary Easement (Temp. Ease.)
- Railroad Tracks
- Existing Culvert
- Culvert to be Constructed
- Guy Wire or Anchor
- Guy Pole
- Powerline Pole
- Telephone or Telegraph Pole
- Pipelines
- Gas (G)
- Water (W)
- Oil (O)
- Storm Sewer (SS)
- Sanitary Sewer (San)
- Electric Cable, U (Underground), A (Aerial) (E)
- Telephone Cable, U (Underground), A (Aerial) (T)
- Cable Television, U (Underground), A (Aerial) (TV)
- Catch Basin
- Manhole
- Inlet
- Waterline Valve
- Fire Hydrant
- Vents (V)
- Meter Boxes (M)
- Traps, Grease etc. (T)
- Cistern or Well (C)
- Cesspool or Septic Tank
- Fountain (F)
- Fenceline (x)
- Direction of Flow
- Bridge
- Deciduous Tree
- Boring Location
- Median Water Surface Elevation (W.S.E.)
- Median Water Surface
- Light Pole

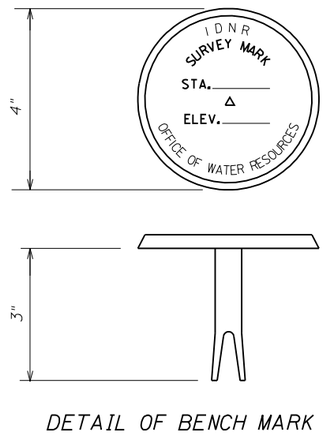
GENERAL NOTES

Signs shall be made of 3/4" plywood or oxboard, or of metal (18 ga.). The Contractor shall furnish all material and labor for constructing and erecting the signs. The signs shall be placed prior to the starting of actual construction operations at each end of the construction section or as directed by the Engineer. Before any sign is erected, it shall be approved by the Engineer as to its appearance and quality of construction. The signs shall remain in place and shall be maintained in satisfactory condition until the project is accepted by the department. The Contractor shall then remove the signs and the material will become his property.

The letters on the sign shall be black mechanical style on a white background and appropriate border lines.

Paid for as Wood Information Signs.





DETAIL OF BENCH MARK

Bench Mark to be furnished by the Office of Water Resources.

See Design Plans for location.

Cost of placing shall be considered included with Concrete Structures.

Designed By JJF Checked By TMM
Drawn By JJF Checked By TMM
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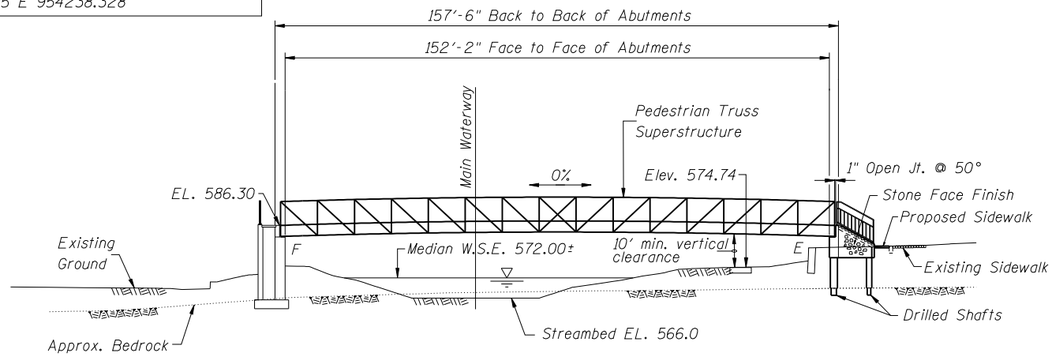
B.M. #2: Metal plug in chiseled square on north abutment. Elev. 582.00 (NGVD '29)
N 1812333.455 E 954238.328



ELEVATION

FOX RIVER CANOE BYPASS
BUILT 2011 BY
IL. DEPT. OF NATURAL RESOURCES
OFFICE OF WATER RESOURCES

NAME PLATE

(See Standard 515001)

Note: Attach name plate to east wingwall at south abutment.

DESIGN SPECIFICATIONS

2002 AASHTO Load Factor Design and Guide Specifications for design of Pedestrian Bridges Published by AASHTO, August 1997

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (M270, Grade 50W) Superstructure
Allowable Rock Bearing Pressure, Qallow = 50 tsf

LOADING

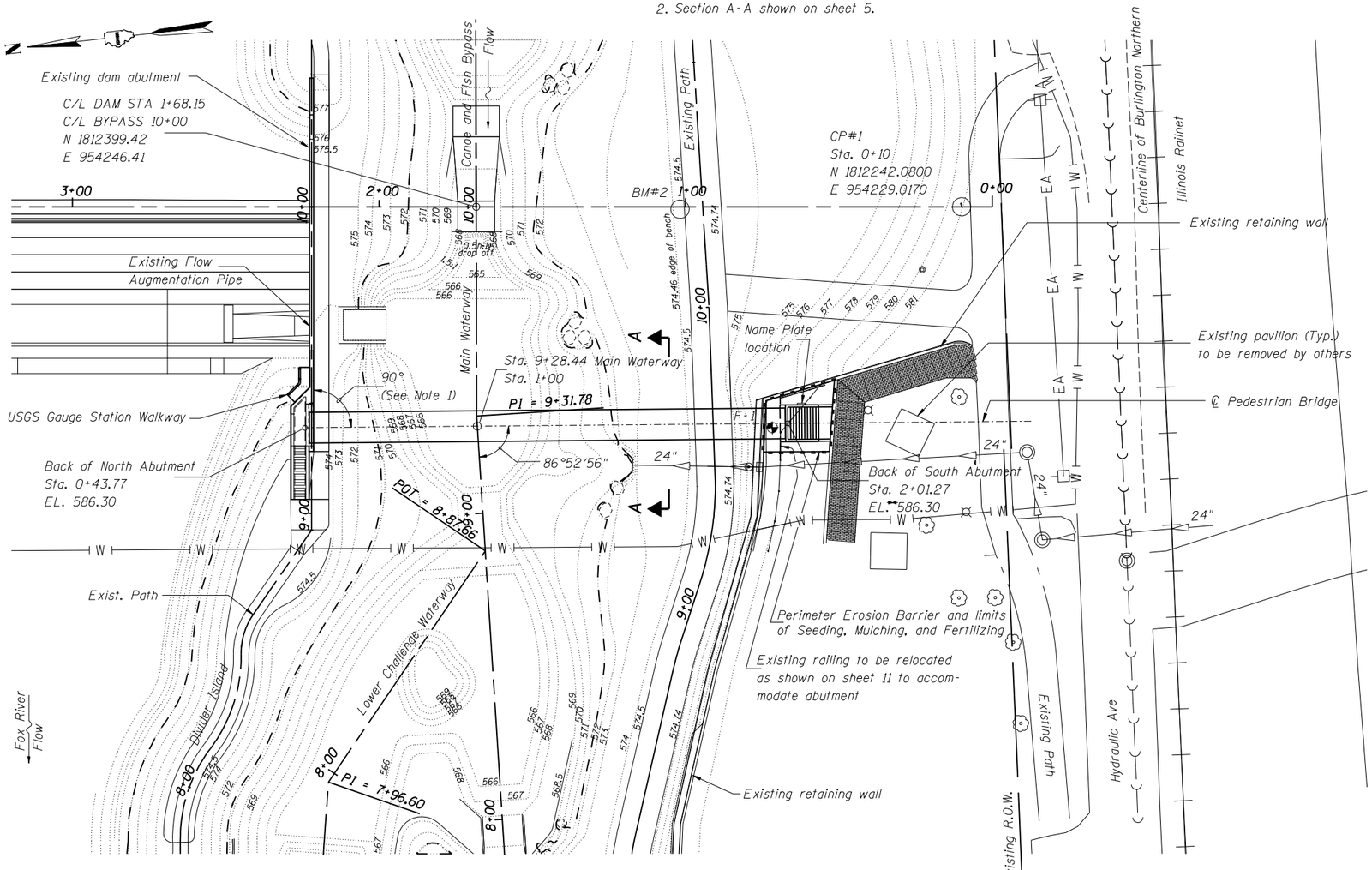
Pedestrian Live Load = 85 psf

SEISMIC DATA

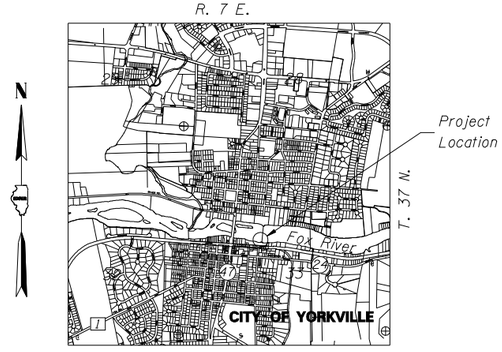
SPC = A
A = 0.05g
Site Coefficient (S) = 1.0

Notes:

1. The bridge shall be constructed at right angles to the existing north abutment. The Engineer shall verify the bridge alignment and location of south abutment prior to construction.
2. Section A-A shown on sheet 5.



PLAN

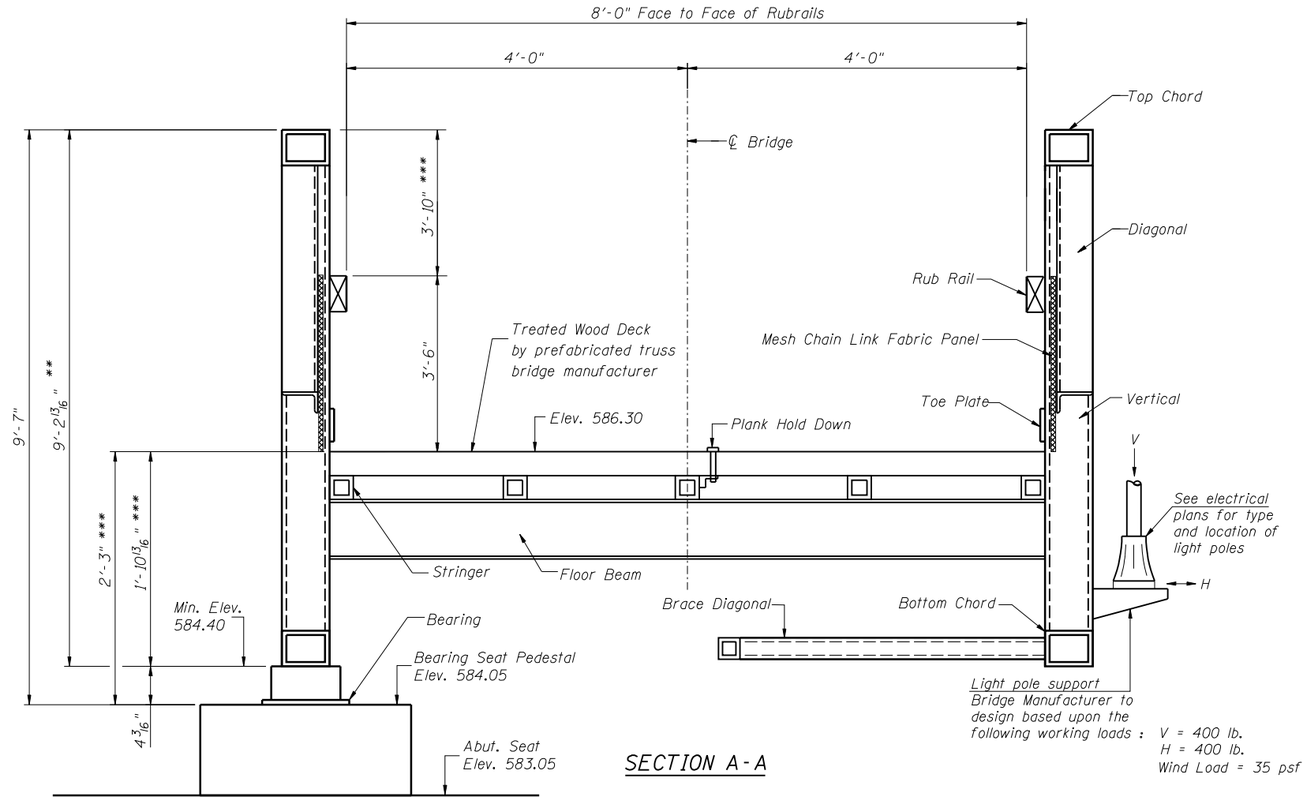


LOCATION SKETCH

TOTAL BILL OF MATERIAL

Item	Unit	Total
Pedestrian Truss Superstructure	Sq Ft	1,294
Reinforcement Bars, Epoxy Coated	Pound	4,300
Concrete Structures	Cu Yd	17
Structure Excavation	Cu Yd	30
Name Plates	Each	1
Bridge Seat Sealer	Sq Ft	21
Pedestrian Railing	Foot	40
Stone Face Finish	Sq Ft	199
Drilled Shaft in Soil	Cu Yd	3.1
Drilled Shaft in Rock	Cu Yd	1.2
Permanent Casing	Foot	34
Portland Cement Concrete Sidewalk 6 Inch	Sq Ft	48
Perimeter Erosion Barrier	Foot	85
Seeding, Mulching, and Fertilizing	Acre	0.01
Gage Station Walkway	L Sum	1

$FILE$ $TIME$ $DATE$
Designed By TMM Checked By JJF
Drawn By JJF Checked By TMM



SECTION A-A

** Superstructure wind loads derived from this dimension. See Note 1.

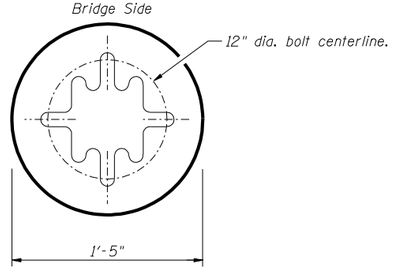
*** Dimension shall be verified by the Contractor prior to ordering substructure concrete and reinforcement bars. Substructure quantities shall be adjusted accordingly.

Substructure elements were designed and prepared in accordance with AASHTO Standard Specifications For Highway Bridges together with the latest interim specifications. The bridge supporting substructure units have been designed for the following loads and load combinations presented below:

BRIDGE REACTIONS		+ Downward Load - Upward Load	
	P (Lbs)	H (Lbs)	L (Lbs)
Dead Load	20,400		
Uniform Live Load	29,160		
Wind Uplift 20 PSF	-11,845		
Wind	±14,955	24,805	
Seismic	N/A	N/A	N/A
Thermal			3,060

"P" - vertical load each base plate (4 per bridge)
"H" - horizontal load each footing (2 per bridge)
"L" - longitudinal load at each base plate (4 per bridge)

Any dimensional design or quantity modifications to the bridge due to a variation of these loading conditions shall be the responsibility of the contractor. Necessary details and design computations for design revisions shall be submitted (in accordance with Article 105.4 of the Standard Specifications) to the Engineer for approval with the bridge shop drawings prior to initiating construction.



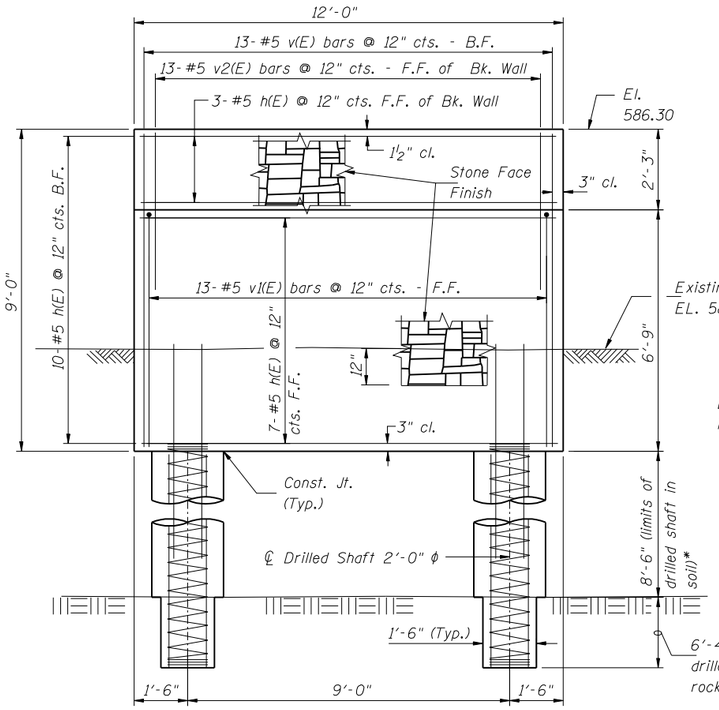
LIGHT POLE ANCHOR BOLT PATTERN

Notes:

1. Member sizes and types as shown are schematic and may differ from those provided by prefabricated truss bridge manufacturer.
2. Bearings and anchor bolts shall be designed and furnished by the prefabricated truss bridge manufacturer.
3. The chain link fabric shall be 9 gauge wire, 2" mesh and it shall be given a brown vinyl coating instead of being galvanized.
4. The 9 gauge fabric ties shall be according to Article 1006.27 (d) of the Standard Specifications. Installation of the chain link fabric shall be according to Section 664 of the Standard Specifications. The chain link fabric shall be placed along Pedestrian side as shown on Section A-A. Stretcher bars shall be used at all four sides of each panel. The chain link fabric shall conform to the requirements of Article 1006.27(a)(1)a, b or c of the Standard Specifications.

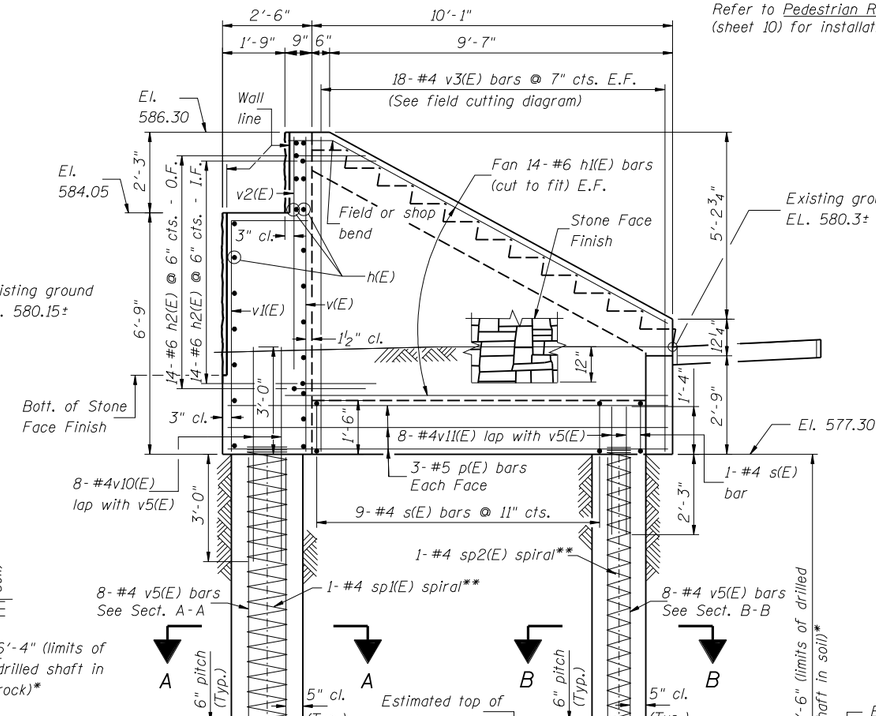
BILL OF MATERIAL

Item	Unit	Quantity
Pedestrian Truss Superstructure	Sq. Ft.	1,294



ELEVATION
(Looking South)

Note:
Refer to Pedestrian Railing - South Abutment (sheet 10) for installation of railing

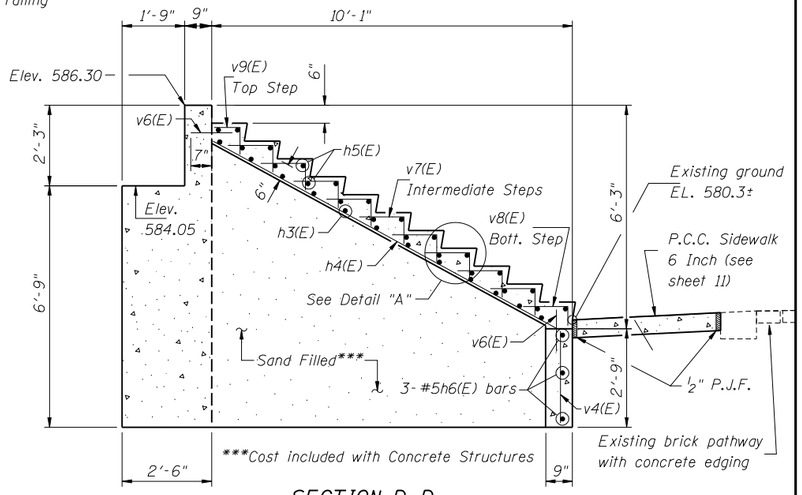


WINGWALL AND DRILLED SHAFT ELEVATION

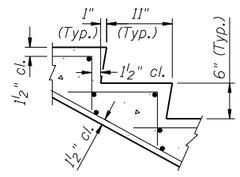
*The quantities and detailing are based on the estimated elevations shown on the plans. The actual elevations may differ at each shaft and corresponding adjustments shall be made to the drilled shaft and reinforcement quantities and payment limits.

** Provide 1½ extra turns top and bottom of each drilled shaft. Extend spiral 2" into abutment or wingwall cap. Provide min. 4-#4 spacers or equivalent.

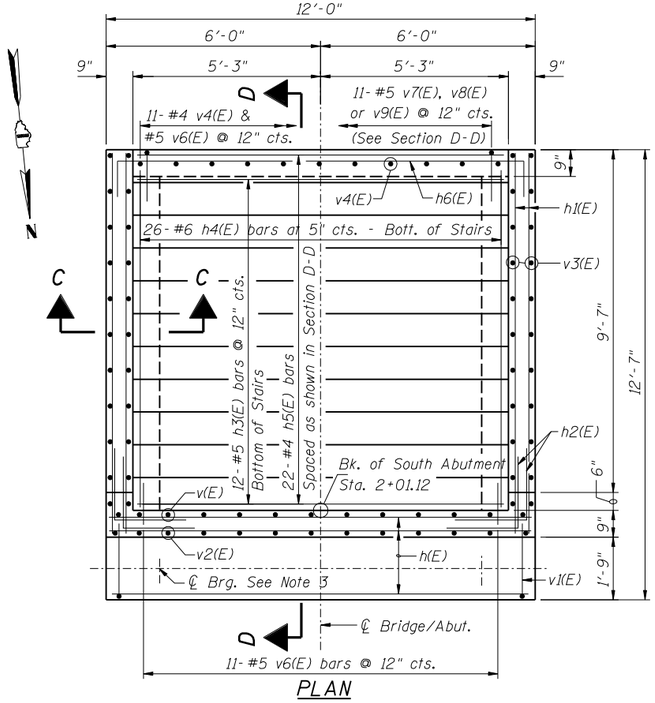
O.F. = Outside Face
I.F = Inside Face
F.F. = Front Face
B.F. = Back Face
E.F. = Each Face



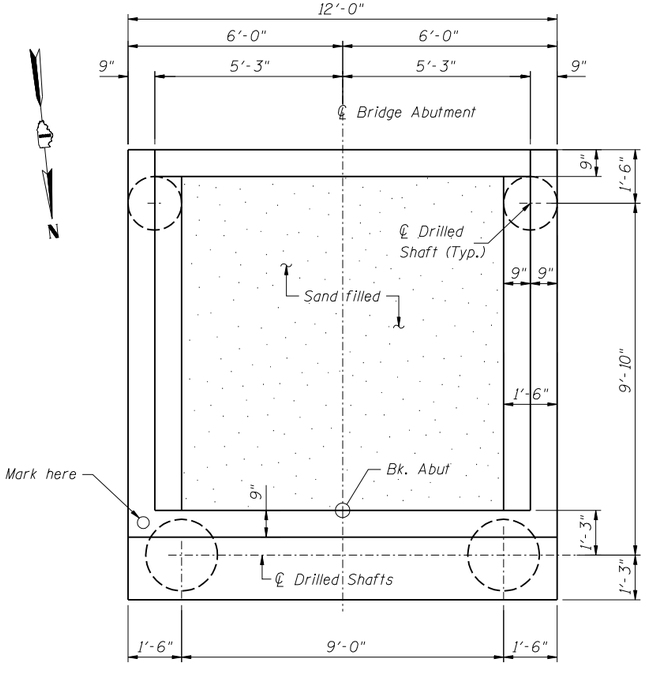
SECTION D-D



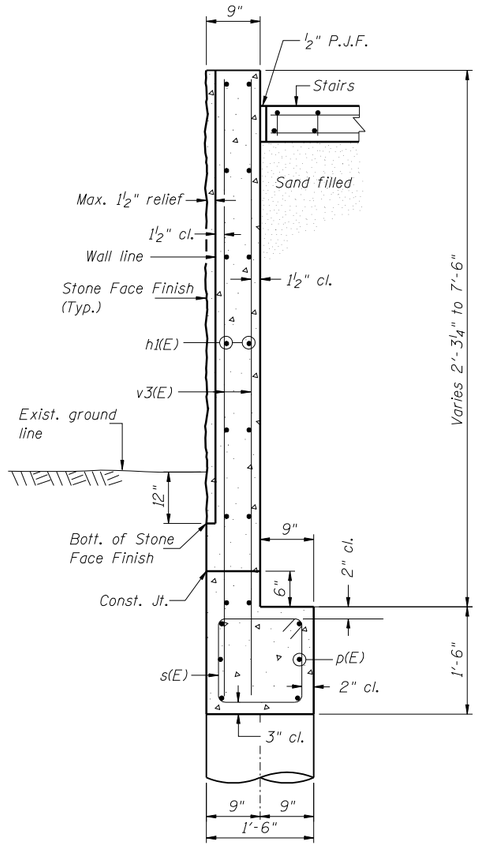
DETAIL "A"



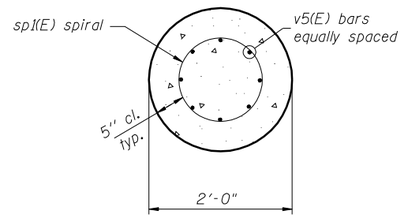
PLAN
(Top View)



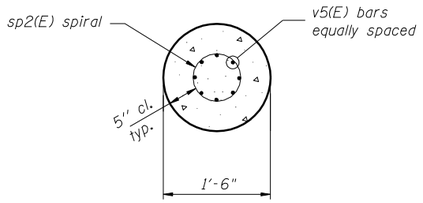
PLAN
(Bottom View)



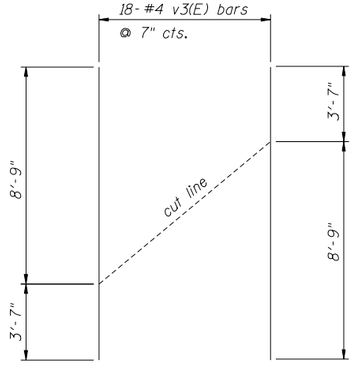
SECTION C-C



SECTION A-A



SECTION B-B

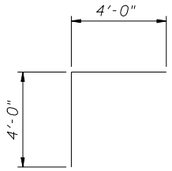


FIELD CUTTING DIAGRAM

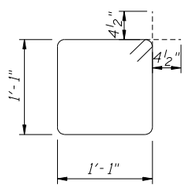
Order v3(E) bars full length. Cut as shown and use remainder in opposite face.

Notes:

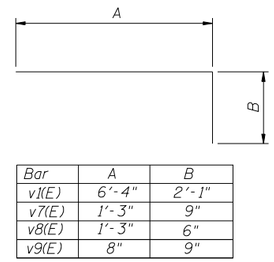
1. Space reinforcement to miss anchor bolts.
2. All edges shall have a 3/4" chamfer unless noted otherwise.
3. Location of bearings to be as required for prefabricated truss bridge used. Prefabricated truss bridge manufacturer shall design berings and anchor bolts to accommodate bearing seat dimensions provided with due consideration for required anchor bolt spacing and distances from anchor bolts to free edges of concrete.
4. The quantities, dimensions, and reinforcement details shown were developed using the bearing seat elevations shown and may change based upon final bearing seat elevations. Contractor shall adjust the bearing seat elevations accordingly to accommodate the prefabricated truss bridge used. Vertical lengths of affected bars shall also be adjusted accordingly.
5. Reinforcement bars designated (E) shall be epoxy coated.



BAR h2(E)

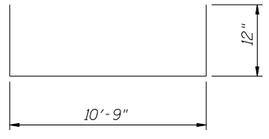


BAR s(E)



Bar	A	B
v1(E)	6'-4"	2'-1"
v7(E)	1'-3"	9"
v8(E)	1'-3"	6"
v9(E)	8"	9"

BARS v1(E) and v7(E) thru v9(E)

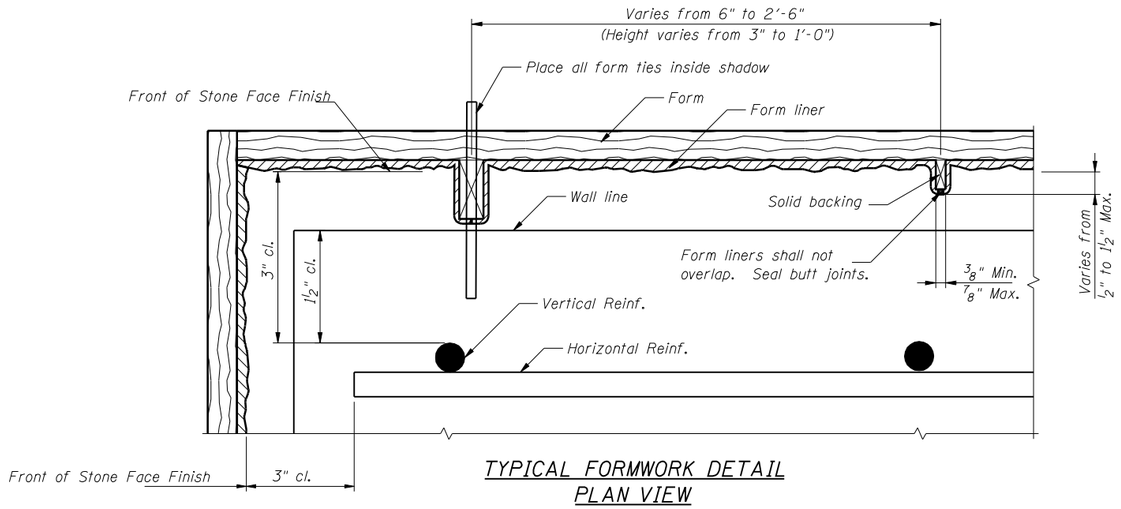


BAR h6(E)

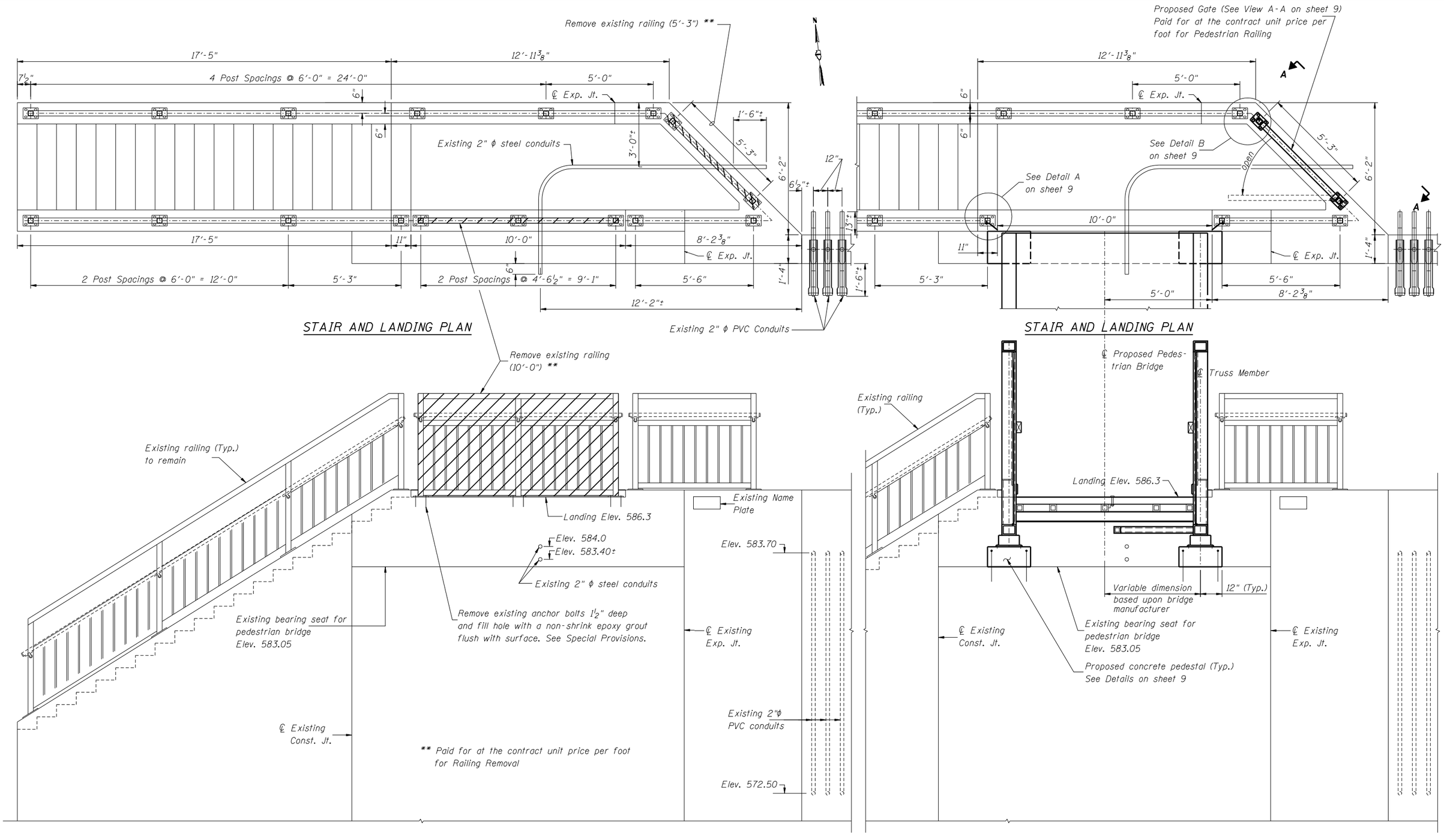
BILL OF MATERIAL*

Bar	No.	Size	Length	Shape
h(E)	20	#5	11'-6"	——
h1(E)	56	#6	12'-0"	——
h2(E)	56	#6	8'-0"	L
h3(E)	12	#5	10'-3"	——
h4(E)	26	#6	11'-0"	——
h5(E)	22	#4	10'-3"	——
h6(E)	3	#5	12'-9"	⌐¬
p(E)	12	#5	12'-1"	——
s(E)	20	#4	5'-1"	□
sp1(E)	2	#4	15'-1"	∿∿∿
sp2(E)	2	#4	15'-1"	∿∿∿
v(E)	13	#5	8'-7"	——
v1(E)	13	#5	8'-5"	⌐¬
v2(E)	13	#5	6'-6"	——
v3(E)	36	#4	12'-4"	——
v4(E)	11	#4	2'-4"	——
v5(E)	32	#4	14'-10"	——
v6(E)	22	#5	1'-2"	——
v7(E)	99	#5	2'-0"	⌐¬
v8(E)	11	#5	1'-9"	⌐¬
v9(E)	11	#5	1'-5"	⌐¬
v10(E)	16	#4	6'-0"	——
v11(E)	16	#4	3'-7"	——
Concrete Structures		Cu Yd	16.8	
Reinforcement Bars, Epoxy Coated		Pound	4,250	
Bridge Seat Sealer		Sq Ft	21	
Structure Excavation		Cu Yd	30	
Stone Face Finish		Sq Ft	199	
Drilled Shaft in Soil		Cu Yd	3.1	
Drilled Shaft in Rock		Cu Yd	1.2	
Permanent Casing		Foot	34	

*See Note 4



TYPICAL FORMWORK DETAIL
PLAN VIEW



STAIR ELEVATION (Looking North)

Stairs, railing, conduit and landing previously constructed during Phase I

RAILING DEMOLITION PLAN

STAIR ELEVATION (Looking North)

RAILING PLAN

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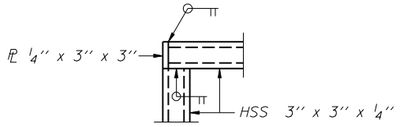
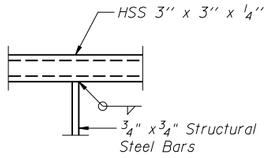
2/14/2011

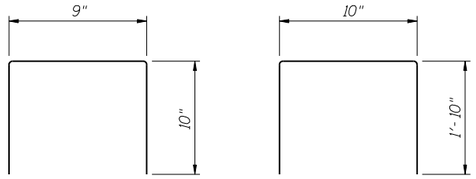
Designed By TMM Checked By JJF
Drawn By JJF Checked By TMM



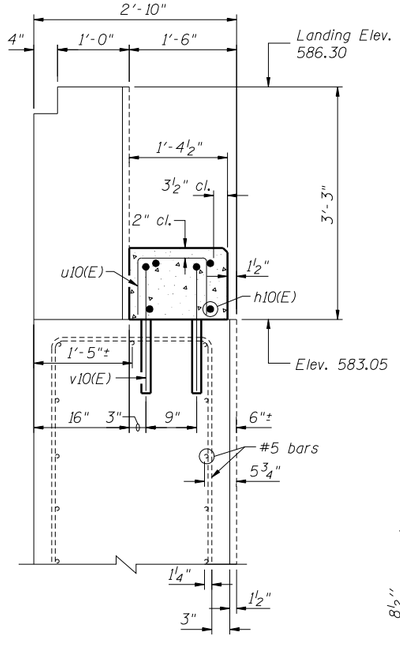
DETAIL C



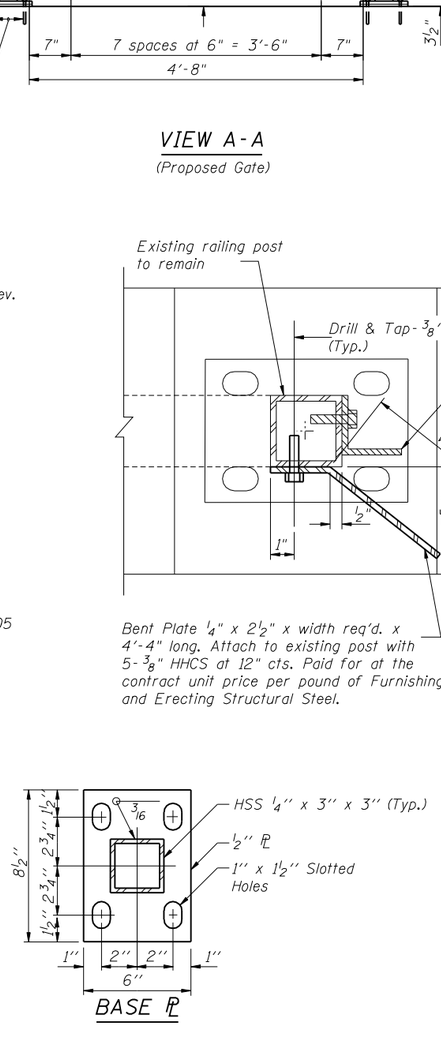
DETAIL D



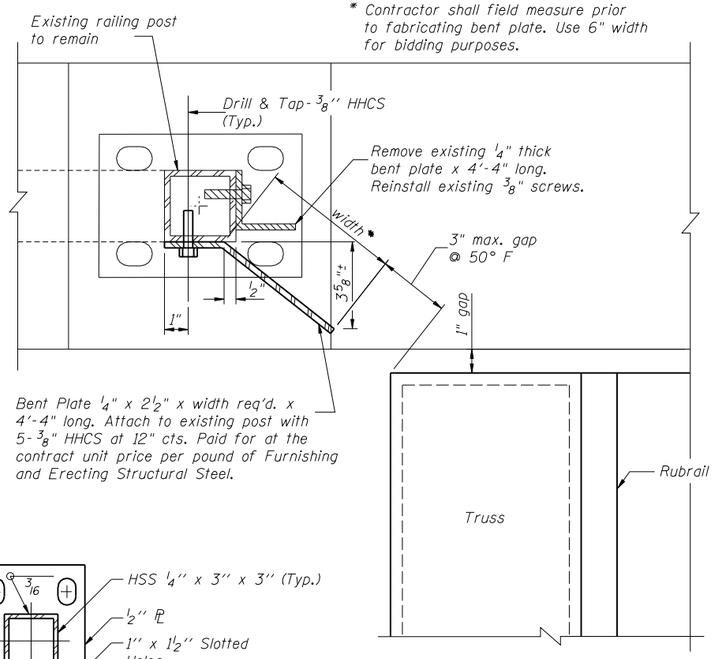
FRONT ELEVATION



SECTION E-E

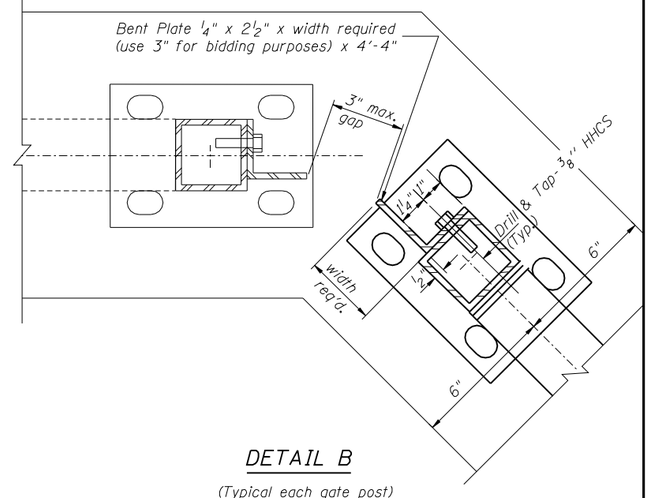


BASE ℄



DETAIL A

(Typical each side of bridge)



DETAIL B

(Typical each gate post)

VIEW A-A

(Proposed Gate)

NOTES

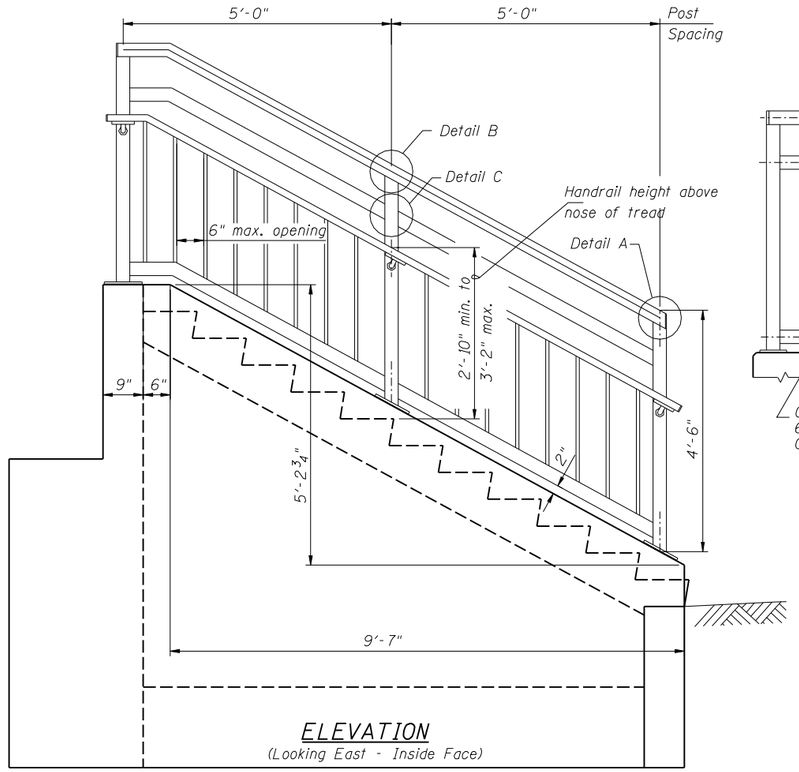
1. Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Pedestrian Railing.
2. Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.
3. All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.
4. All post, railing, anchor devices, and bent plates shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. All bolts, nuts, washers, and anchor rods shall be galvanized according to AASHTO M 232 except stainless steel bolts as noted. Vent holes for galvanizing shall be placed in the posts and railings at locations that will not allow the accumulation of moisture in the members.
5. Space reinforcement to miss anchor bolts.
6. All edges shall have a 3/4" chamfer unless noted otherwise.
7. Location of bearings to be as required for prefabricated truss bridge used. Prefabricated truss bridge manufacturer shall design bearings and anchor bolts to accommodate bearing seat dimensions provided with due consideration for required anchor bolt spacing and distances from anchor bolts to free edges of concrete.
8. The quantities, dimensions, and reinforcement details shown were developed using the bearing seat elevations shown and may change based upon final bearing seat elevations. Contractor shall adjust the bearing seat elevations accordingly to accommodate the prefabricated truss bridge used. Vertical lengths of affected bars shall also be adjusted accordingly.
9. Epoxy grouting of bars shall be done according to Section 584 of the Standard Specifications. The grout and method of application shall be approved by the Engineer. Cost included with Reinforcement Bars, Epoxy Coated.
10. Reinforcement bars designated (E) shall be epoxy coated.

BILL OF MATERIAL

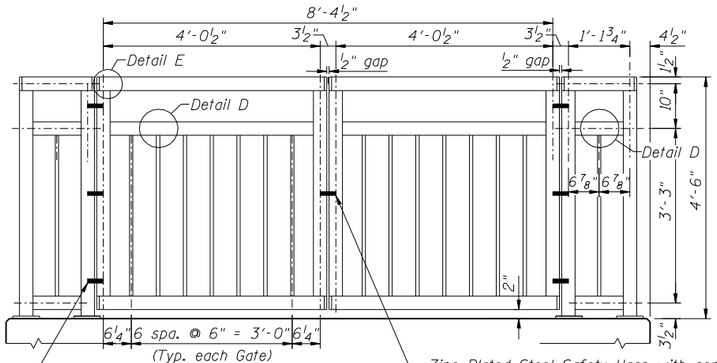
Bar	No.	Size	Length	Shape
h10(E)	8	#5	1'-8"	——
u10(E)	6	#5	2'-5"	⊓
v10(E)	8	#5	2'-8"	⊐

Item	Unit	Quantity
Pedestrian Railing	Foot	6
Furnishing and Erecting Structural Steel	Pound	100
Railing Removal	Foot	16
Concrete Structures	Cu Yd	0.2
Reinforcement Bars, Epoxy Coated	Pound	50

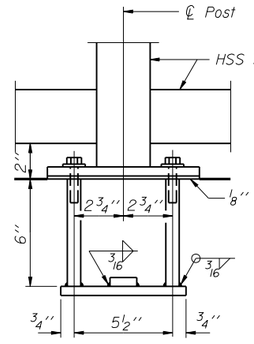
CONCRETE PEDESTAL DETAILS

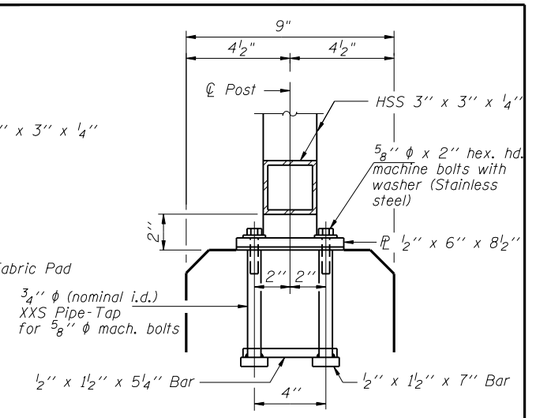


ELEVATION
(Looking East - Inside Face)



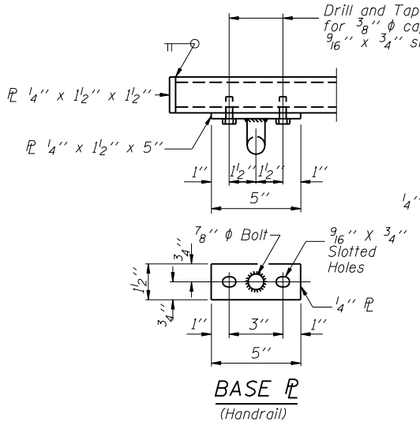
VIEW A-A



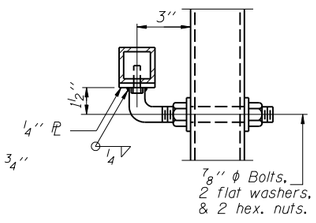


ANCHOR BOLT DETAILS

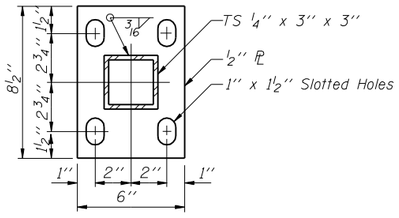
In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting ⅝" ϕ anchor rods. Embedment shall be according to the manufacturer's specifications.



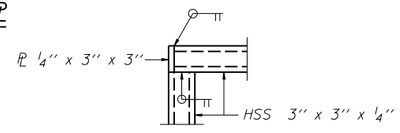
BASE ℄
(Handrail)



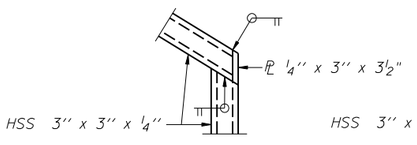
HANDRAIL DETAIL



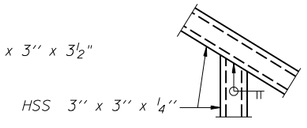
BASE ℄



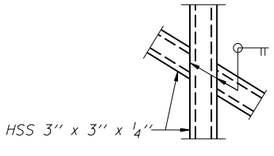
DETAIL E



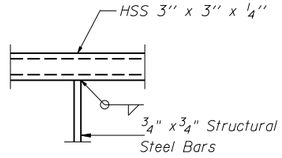
DETAIL A



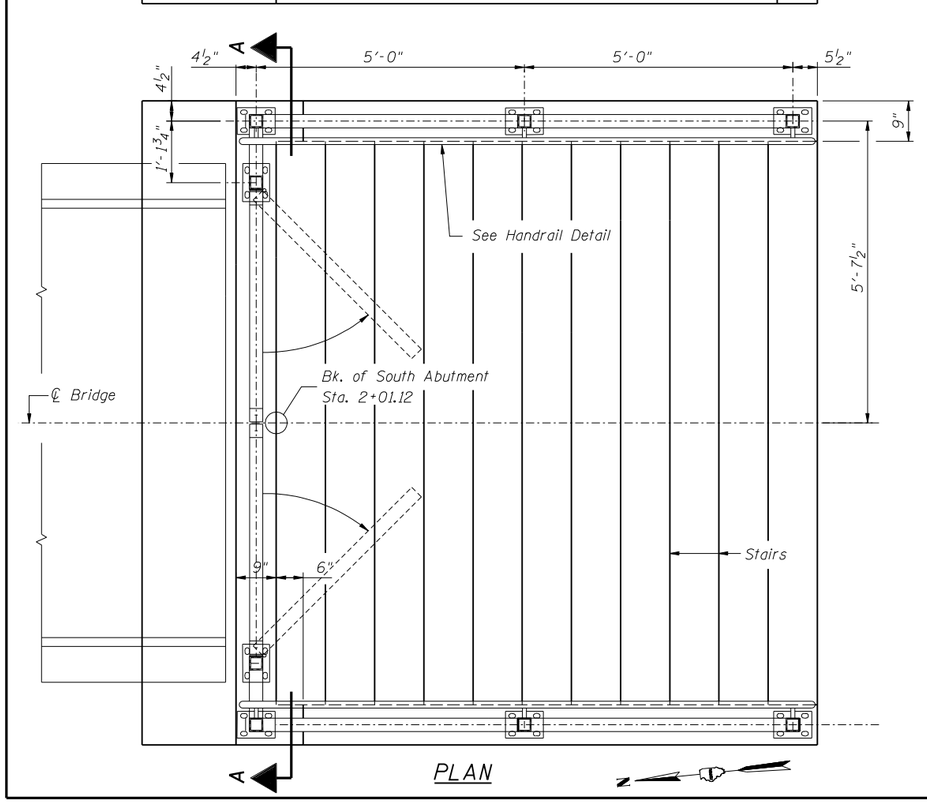
DETAIL B



DETAIL C



DETAIL D



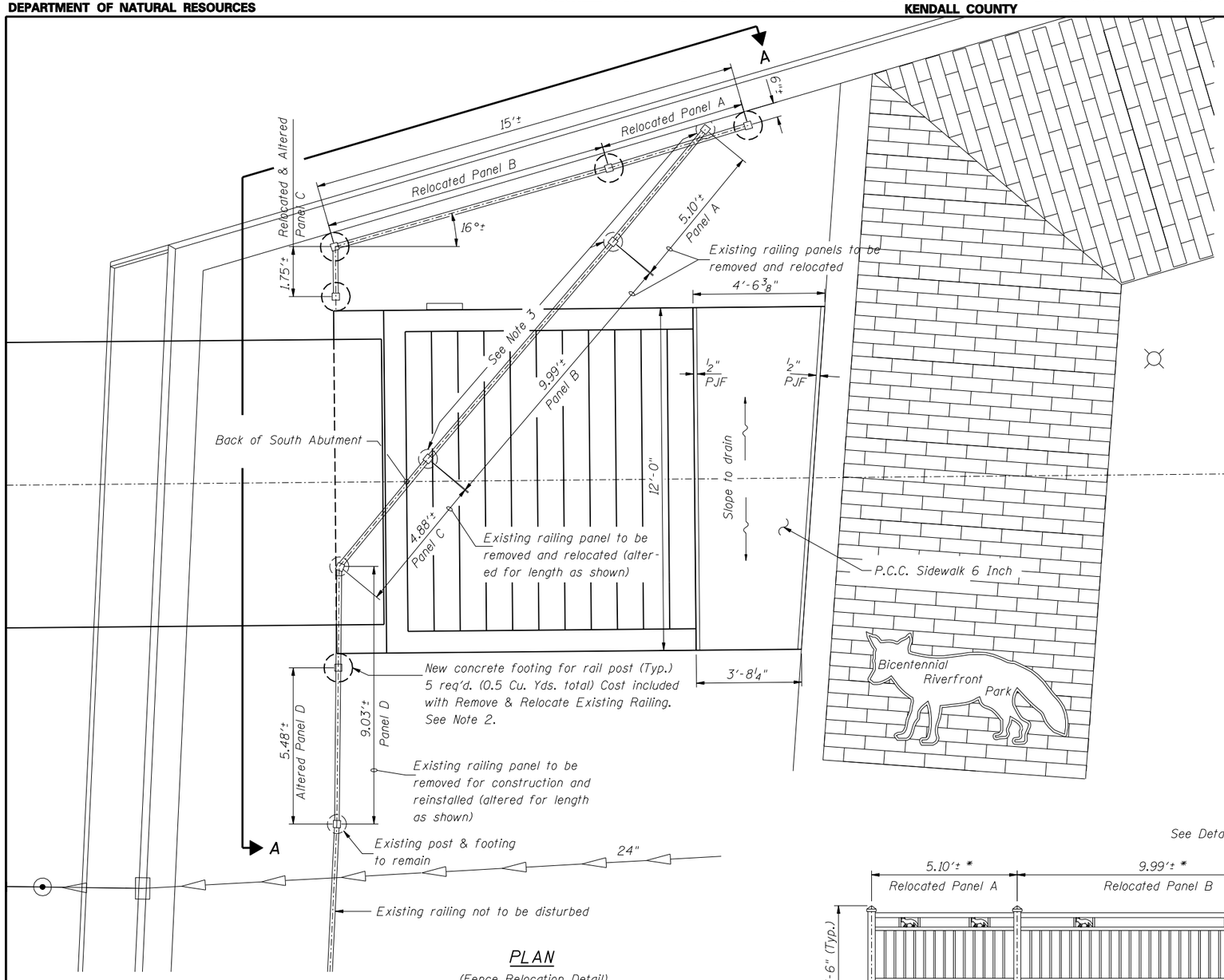
PLAN

NOTES

1. Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Pedestrian Railing.
2. Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.
3. All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.
4. If the option of drilling and epoxy grouting the anchor rods is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.
5. All post, railing, anchor devices, and bent plates shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. All bolts, nuts, washers, and anchor rods shall be galvanized according to AASHTO M 232 except stainless steel bolts as noted. Vent holes for galvanizing shall be placed in the posts and railings at locations that will not allow the accumulation of moisture in the members.
6. Space reinforcement to miss anchor bolts.

BILL OF MATERIAL

Item	Unit	Quantity
Pedestrian Railing	Foot	34



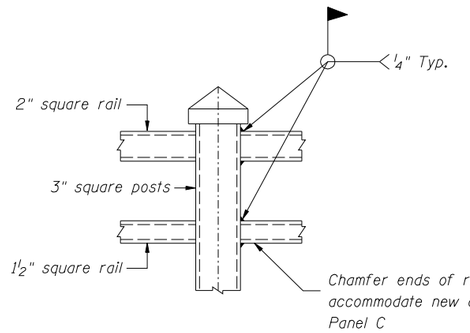
PLAN
(Fence Relocation Detail)

Notes:

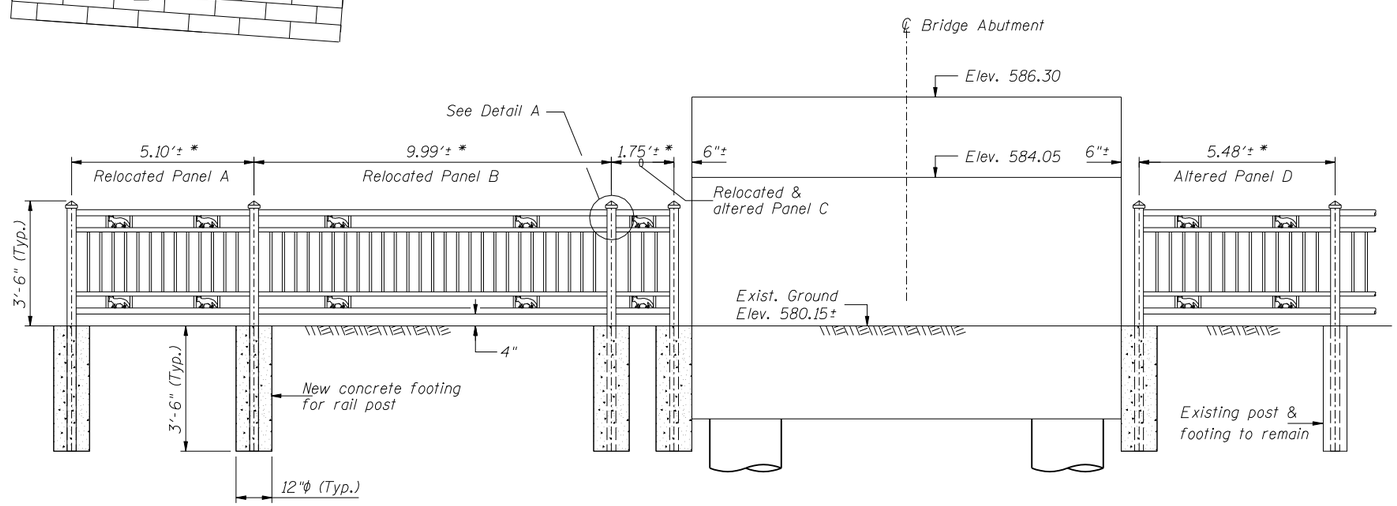
1. The welded joints shall be cleaned and painted in accordance with Section 506 of the IDOT Std. Specifications. The top coat shall be No.5 Green paint manufactured by Raabe Corporation, Menomonee Falls, Wisconsin (or approved equal). The paint color is also identified as 4113400, packaged for Game Time, Inc., Fort Payne, Alabama.

2. The concrete from the existing footings shall be carefully removed from around the posts so as not to damage them. The railing panels shall then be re-erected as shown. Any items which have been damaged by the Contractor shall be replaced at Contractor's expense, and at no additional cost to the Department, with new material of the same kind, and installed in a manner satisfactory to the Engineer.

3. Remove existing 8"ϕ caissons/footings to at least 1 foot below the existing ground line elevation. Portions of those caissons/footings below this elevation that interfere with the proposed construction shall also be removed.



DETAIL A



VIEW A-A

* Panel lengths shown may need to be altered in field to suit actual field conditions. Contractor shall verify these lengths prior to commencing work. See Special Provision.

BILL OF MATERIAL

Remove and Relocate Existing Railing	Foot	23
P.C.C. Sidewalk 6 Inch	Sq.Ft	48

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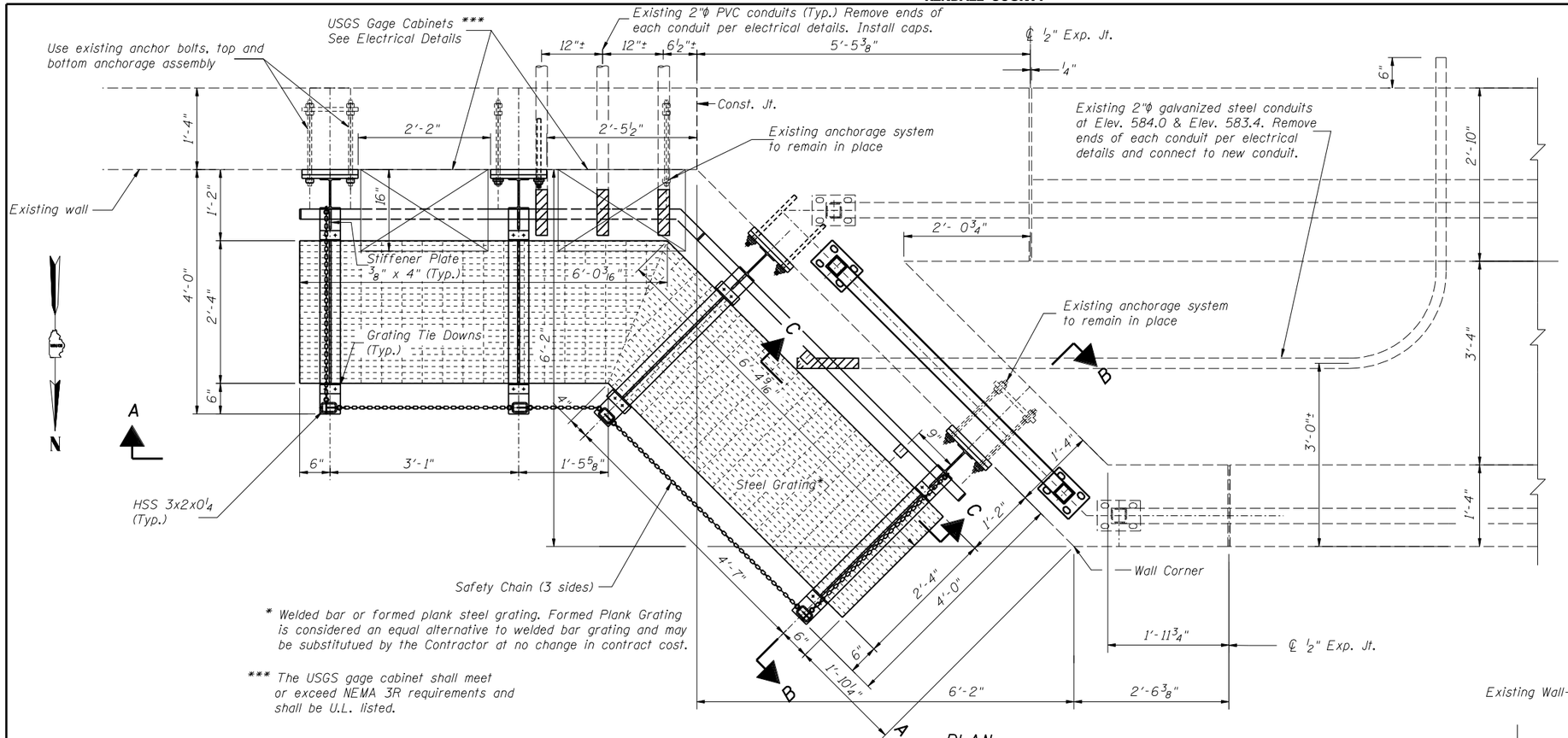
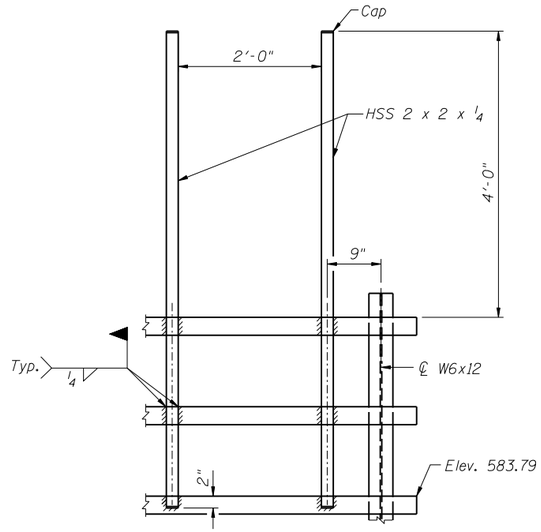
Designed By JJF Checked By TMM
Drawn By TMM Checked By JJF



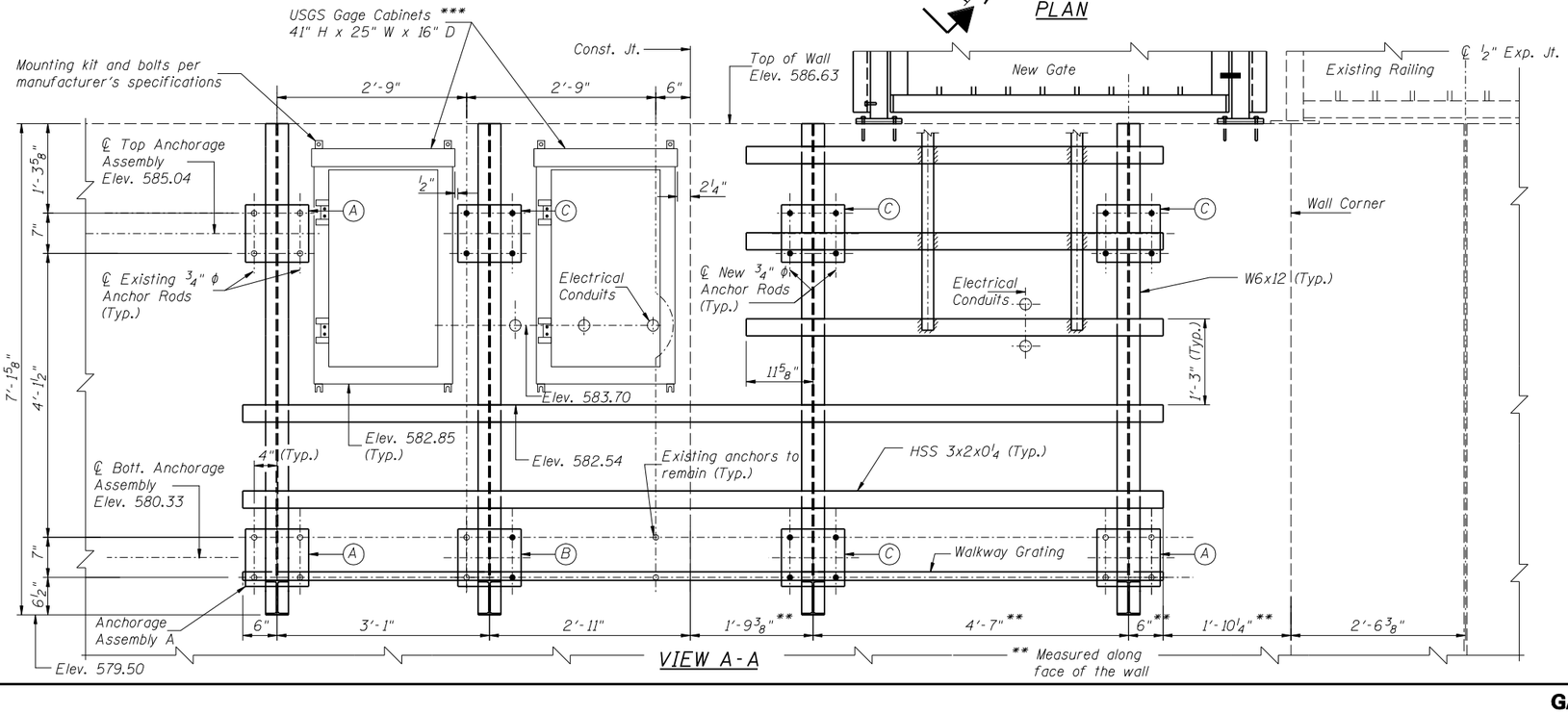
PLAN



VIEW C-C

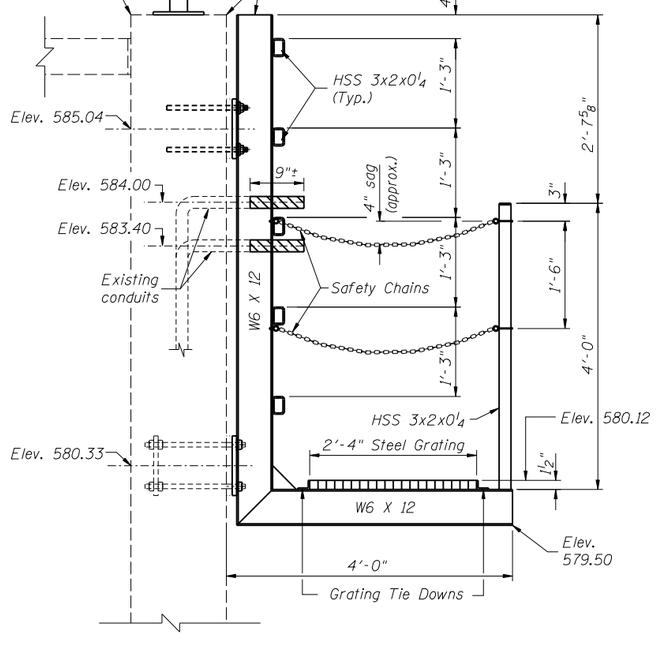
* Welded bar or formed plank steel grating. Formed Plank Grating is considered an equal alternative to welded bar grating and may be substitutued by the Contractor at no change in contract cost.

*** The USGS gage cabinet shall meet or exceed NEMA 3R requirements and shall be U.L. listed.



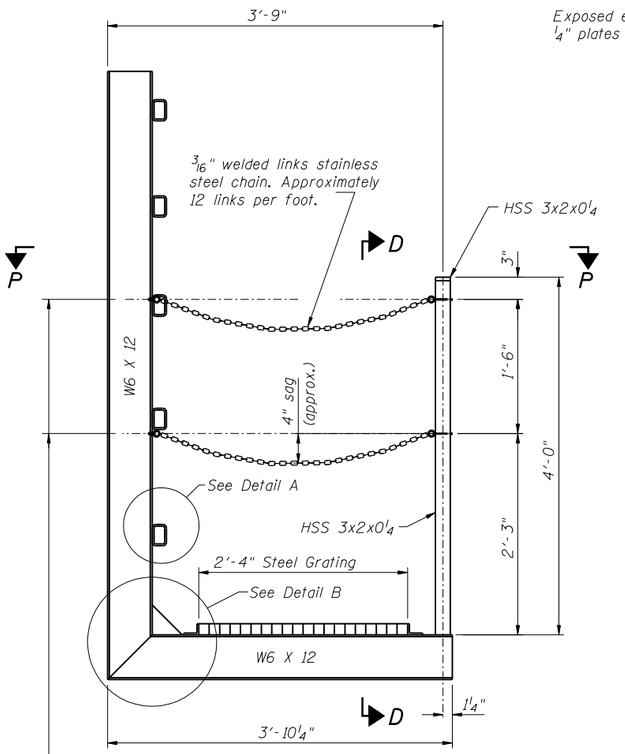
VIEW A-A

** Measured along face of the wall



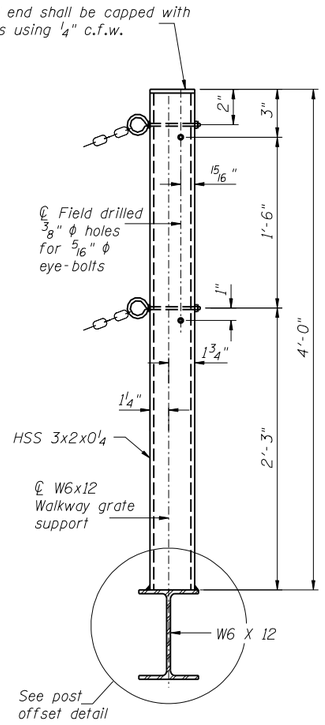
SECTION B-B

Note: Work this sheet with sheets 13 & 14.

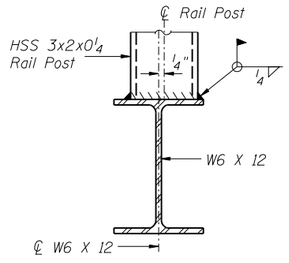


SAFETY CHAIN ATTACHMENT

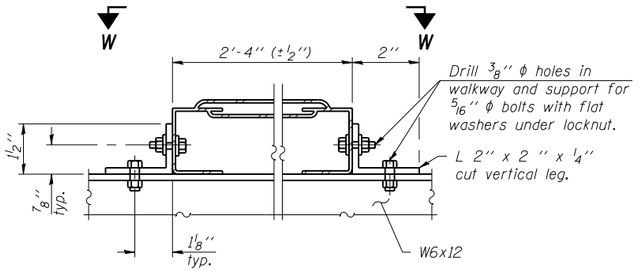
(East side of platform - other sides similar)



SECTION D-D

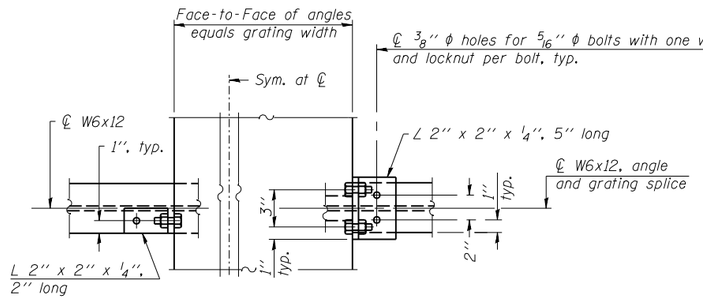


POST OFFSET DETAIL



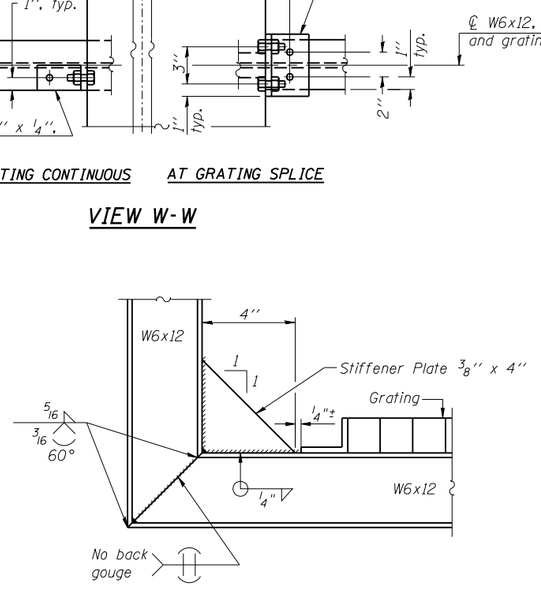
ALTERNATE FORMED PLANK GRATING DETAILS

Plank Grating: nominal depth = 2 1/2" (±1/2"); perforated or expanded steel sheet with a non-skid surface (non-serrated) concentrated load capacity = 500 lbs. with 6'-0" clear span.

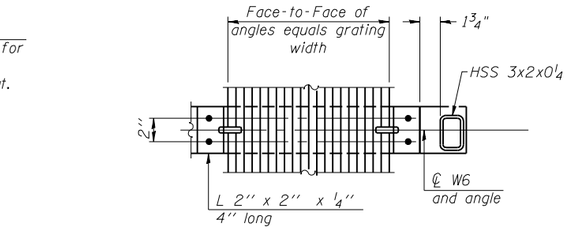


GRATING CONTINUOUS AT GRATING SPLICE

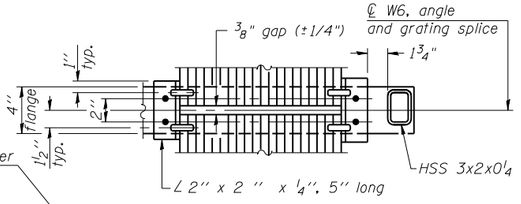
VIEW W-W



DETAIL B

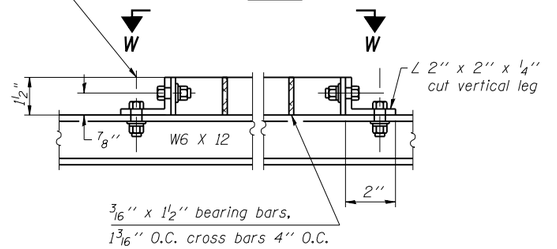


(WALKWAY GRATING CONTINUOUS)

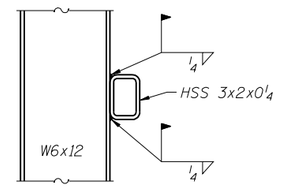


(AT WALKWAY GRATING SPLICE)

PLAN

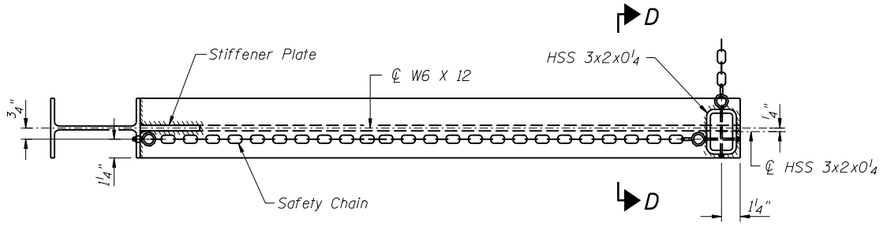


WELDED BAR GRATING DETAILS



DETAIL A

Note:
Work this sheet with sheets 12 & 14.



VIEW P-P

Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment. Field drilled holes must be touched up with galvanized paint.

All steel grating, plates, shapes and pipe shall be hot dip galvanized after shop fabrication according to AASHTO M111. Paint is not permitted.

Contractor shall field check all pertinent existing dimensions shown on plans before submitting shop drawings.

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M 164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

ANCHOR RODS: All - threaded rod conforming to ASTM A307 3/4"ϕ x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be epoxy grouted according to Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

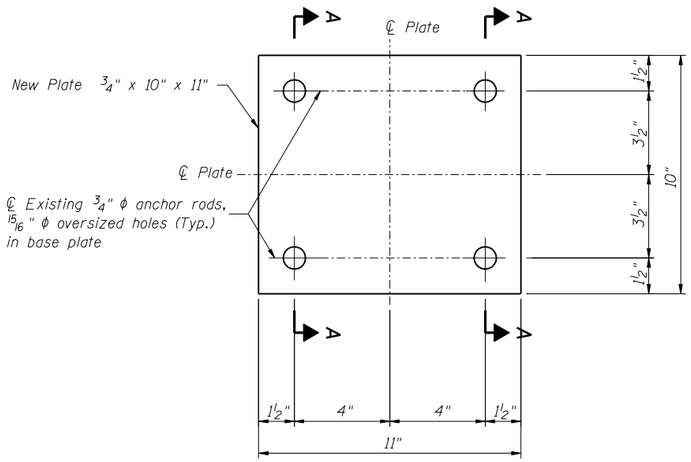
SAFETY CHAIN: Safety chain to be type 304L stainless steel suitable for prolonged exterior exposure. A total of approx. 30 feet of chain is required. Maximum sag with HSS section erected = 4" .

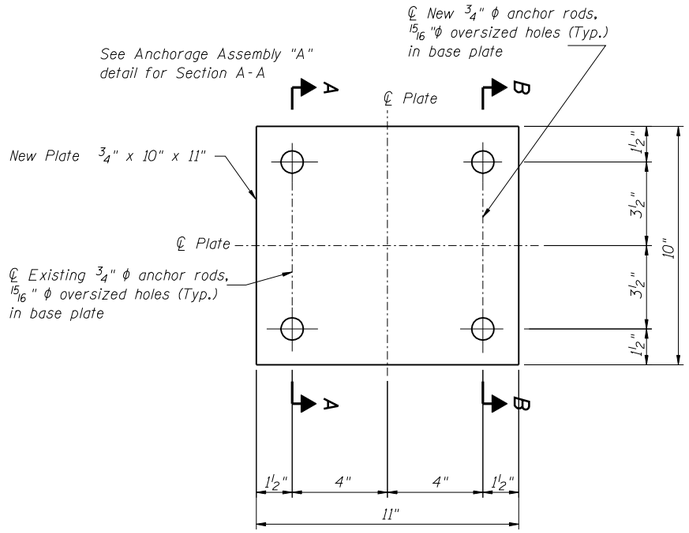
GRATING: Grating shall be designed for 100 lbs./sq.ft. live load. Grating tie-down angles may be either bolted to W6x12 after galvanizing or welded to W6x12 before galvanizing, at the Contractor's option. (No weld on grating side).

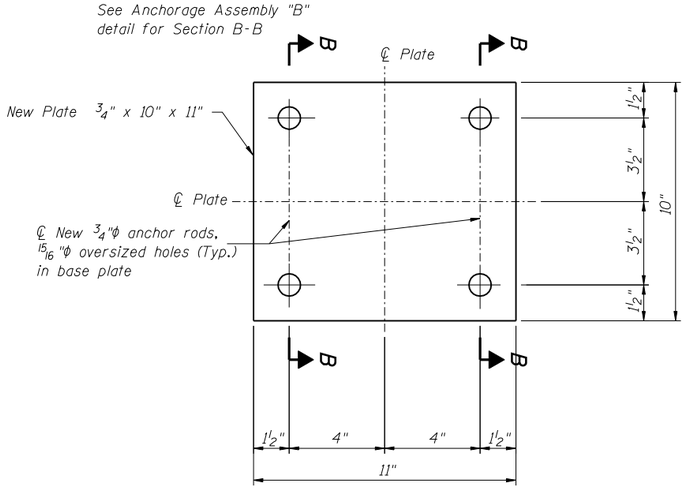
STRUCTURAL TUBING: Hollow structural steel tubing shall conform to the requirements of ASTM designation A500, Grade B, structurall steel tubing.

All HSS members with exposed ends shall be capped with 1/4" plates using 1/4" c.f.w.

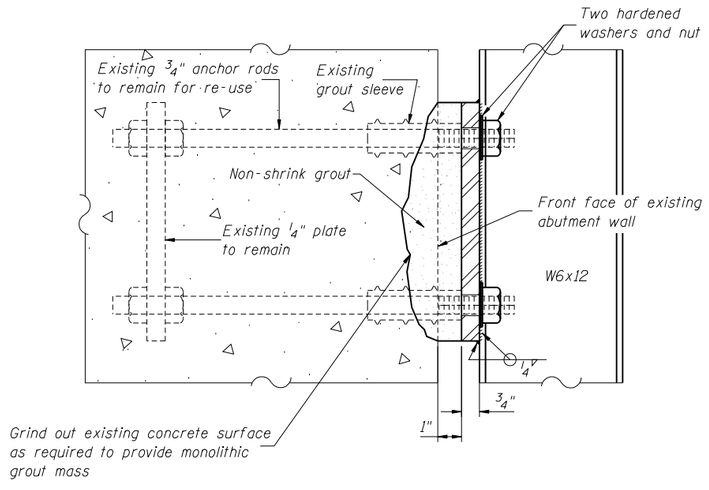
Estimated weight of structural steel = 1,620 pounds (for information only).





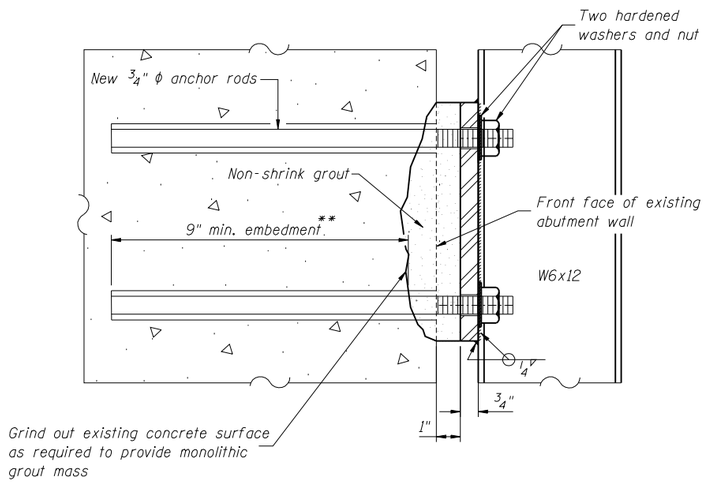


ANCHORAGE ASSEMBLY "C"



SECTION A-A

ANCHORAGE ASSEMBLY "A"



** Epoxy grouting of anchor rods shall be done according to section 584 of the Standard Specifications

SECTION B-B

ANCHORAGE ASSEMBLY "B"

NOTE:
Work this sheet with sheets 12 & 13.

BILL OF MATERIAL

Item	Unit	Total
Gage Station Walkway	L Sum	1

Designed By TMM Checked By JJF
Drawn By JJF Checked By TMM
2/14/2011 5:07:36 PM
O:\OwrProjImpl\Projects\Yorkville Dam Phase 3\Plans DGN\Gage Station Walkway III.dgn

STS Consultants Ltd.

OWNER: IDNR/City of Yorkville
LOG OF BORING NUMBER: F-1
PROJECT NAME: Yorkville Dam
ARCHITECT-ENGINEER: Teng & Assoc.
SITE LOCATION: Kendall County, Illinois

SURFACE ELEVATION +580.0 NGVD

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT.³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION BLOWS/FT.
						Topsoil						
						0.3						
1.0		1	SS			Fill: Gravelly clay, little silt, trace sand, crushed concrete and brick fragments - brown - moist (CL)						8
2.0			PA									
3.0		2	SS									4
4.0			PA									
5.0		3	SS									15
6.0												
7.0			PA									
8.0		4	SS*									5/6"
9.0			PA									
10.0		5	SS									6/6"
11.0		5A	SS									
						11.3						
						. . . continued						

50/3"

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

STS JOB NO.	SHEET NO.	OF
34098	1	3

STS Consultants Ltd.

OWNER: IDNR/City of Yorkville
LOG OF BORING NUMBER: F-1
PROJECT NAME: Yorkville Dam
ARCHITECT-ENGINEER: Teng & Assoc.
SITE LOCATION: Kendall County, Illinois

SURFACE ELEVATION +580.0 NGVD (Continued)

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT.³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION BLOWS/FT.
						Highly weathered shale						
12.0			RB									
13.0												
14.0												
15.0						15.0						
		6	SS*			Moderately weathered soft shale						
						15.3						
						Hard shaly limestone						
						Recovery = 99%						
16.0						RQD = 83%						
						16.1						
						Moderately weathered soft shale						
						16.7						
17.0						Hard shaly limestone						
						17.8						
18.0						Moderately weathered soft shale						
19.0			RUN 1									
20.0			DB			19.8						
						Hard shaly limestone						
						Qu = 15,345 psi						
						20.5						
21.0						Moderately weathered soft shale						
						21.0						
						Hard shaly limestone						
						21.4						
22.0						Moderately weathered soft shale						
						. . . continued						

50/4"

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

STS JOB NO.	SHEET NO.	OF
34098	2	3

STS Consultants Ltd.

OWNER: IDNR/City of Yorkville
LOG OF BORING NUMBER: F-1
PROJECT NAME: Yorkville Dam
ARCHITECT-ENGINEER: Teng & Assoc.
SITE LOCATION: Kendall County, Illinois

SURFACE ELEVATION +580.0 NGVD (Continued)

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT.³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION BLOWS/FT.
						Moderately weathered soft shale						
23.0						23.2						
						Hard shaly limestone						
						23.5						
						Moderately weathered soft shale						
24.0			RUN 1			24.1						
			DB			Hard shaly limestone						
						24.3						
						Moderately weathered soft shale						
25.0						25.0						
						End of Boring Borehole grouted upon completion. Casing used: 15 ft. of 4 in. Automatic-Diedrich Hammer used for Standard Penetration Tests. SS* = SPT value based on first 6 in.						

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	BORING STARTED	STS OFFICE	
WL	9/8/04	Chicago Area - 01	
WL	BORING COMPLETED	ENTERED BY	SHEET NO. OF
WL	9/9/04	KKB	3 3
WL	RIG/FOREMAN	APP'D BY	STS JOB NO.
	Bomb/Lehtinen	DSD	34098

STS Consultants Ltd.

OWNER: IDNR/City of Yorkville
LOG OF BORING NUMBER: A-8
PROJECT NAME: Yorkville Dam
ARCHITECT-ENGINEER: Teng & Assoc.
SITE LOCATION: Kendall County, Illinois

SURFACE ELEVATION +582.1 NGVD

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT.³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION BLOWS/FT.
						Topsoil						
						0.7						
1.0		1	SS			Fill: Silty fine to coarse sand, little gravel, trace clay, crushed concrete and brick - brown - medium dense - moist (SM)						26
2.0			PA									
3.0		2	SS									15
4.0			PA									
5.0		3	SS									16
6.0												
7.0			PA									
8.0		4	SS									9/6"
						8.5						
9.0		4A	SS			Highly weathered soft shale and interbedded limestone						
						9.0						
						End of Boring Borehole backfilled upon completion. Automatic-Diedrich Hammer used for Standard Penetration Tests.						

40/6"

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	BORING STARTED	STS OFFICE	
WL	9/13/04	Chicago Area - 01	
WL	BORING COMPLETED	ENTERED BY	SHEET NO. OF
WL	9/13/04	KKB	1 1
WL	RIG/FOREMAN	APP'D BY	STS JOB NO.
	Bomb/Lehtinen	DSD	34098

STS Consultants Ltd.

OWNER: IDNR/City of Yorkville
LOG OF BORING NUMBER: A-9
PROJECT NAME: Yorkville Dam
ARCHITECT-ENGINEER: Teng & Assoc.
SITE LOCATION: Kendall County, Illinois

SURFACE ELEVATION +576.1 NGVD

DEPTH(FT)	ELEVATION(FT)	SAMPLE ID.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT.³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION BLOWS/FT.
						Topsoil						
						0.5						
1.0		1	SS			Fill: Silty fine to coarse sand, little gravel, trace clay, roots, wood and crushed concrete - brown - medium dense to loose (SM)						17
2.0			PA									
3.0		2	SS									27
4.0			PA									
5.0												13
6.0		3	SS									
						6.5						
7.0		3A	SS			Gravelly fine to coarse sand, little silt, trace clay and organics - gray - loose (GM-SM) (Possible fill)						9/6"
			PA									
8.0						Clayey between 7.5 and 9.5 ft.						3
		4	SS									
9.0			PA									
10.0						. . . continued						

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

STS JOB NO.	SHEET NO.	OF
34098	1	2

STS Consultants Ltd.

OWNER: IDNR/City of Yorkville
LOG OF BORING NUMBER: A-9
PROJECT NAME: Yorkville Dam
ARCHITECT-ENGINEER: Teng & Assoc.
SITE LOCATION: Kendall County, Illinois

SURFACE ELEVATION +576.1 NGVD (Continued)

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT.³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION BLOWS/FT.
		5	SS			Gravelly fine to coarse sand, little silt, trace clay and organics - gray - loose (GM-SM) (Possible fill)						5/6"
11.0						11.0						
11.3		5A	SS			Highly weathered soft shale						
						11.3						
						End of Boring Borehole backfilled upon completion. Automatic-Diedrich Hammer used for Standard Penetration Tests.						

50/3"

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	BORING STARTED	STS OFFICE	
WL	9/14/04	Chicago Area - 01	
WL	BORING COMPLETED	ENTERED BY	SHEET NO. OF
WL	9/14/04	KKB	2 2
WL	RIG/FOREMAN	APP'D BY	STS JOB NO.
	Bomb/Lehtinen	DSD	34098

STS Consultants Ltd.

OWNER: IDNR/City of Yorkville
LOG OF BORING NUMBER: A-10
PROJECT NAME: Yorkville Dam
ARCHITECT-ENGINEER: Teng & Assoc.
SITE LOCATION: Kendall County, Illinois

SURFACE ELEVATION +572.5 NGVD

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT.³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT.²	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION BLOWS/FT.
		1	SS			Fill: Silty fine to coarse sand, little clay, trace gravel and shale - brown - medium dense (SM)						18
1.0												
2.0			PA									
3.0		2	SS									14
4.0			PA									
5.0						5.0						
5.3		3	SS*			Highly weathered soft shale						
						5.3						
						End of Boring Borehole backfilled upon completion. Automatic-Diedrich Hammer used for Standard Penetration Tests. SS* = SPT value based on first 6 in.						

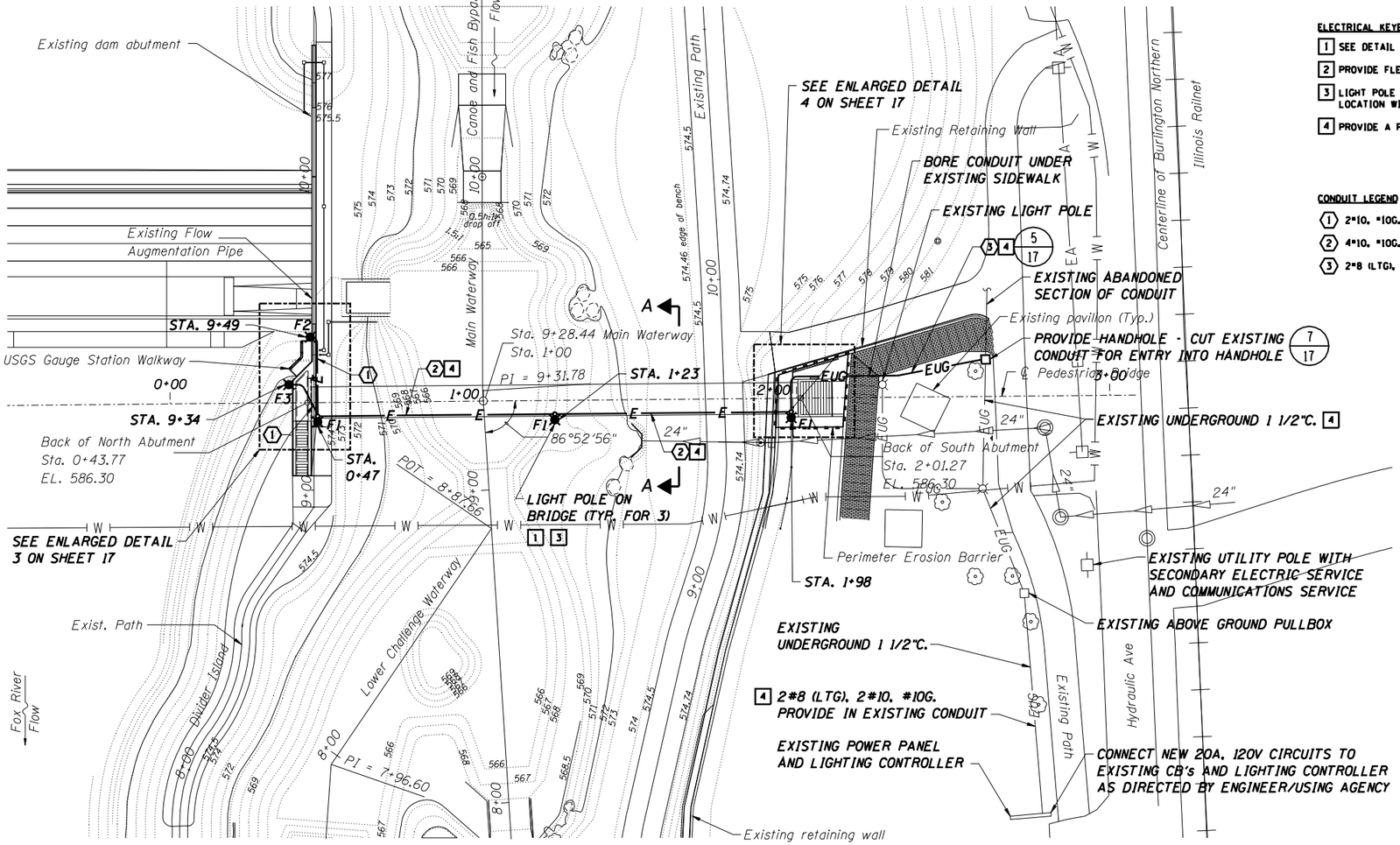
50/3"

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	BORING STARTED	STS OFFICE	
WL	9/14/04	Chicago Area - 01	
WL	BORING COMPLETED	ENTERED BY	SHEET NO. OF
WL	9/14/04	KKB	1 1
WL	RIG/FOREMAN	APP'D BY	STS JOB NO.
	Bomb/Lehtinen	DSD	34098

Designed By ____ Drawn By JUF ____ Checked By TMM ____
Designed By ____ Drawn By TMM ____ Checked By JUF ____

$FILE$ $TIME$ $DATE$



PLAN

20 0 20 40
SCALE: 1" = 20'

ELECTRICAL KEYED NOTES

1. SEE DETAIL 1/17 FOR JUNCTION BOX LIGHTING AND LIGHTING CIRCUIT CONNECTION TO FIXTURE.
2. PROVIDE FLEXIBLE CONDUIT AT ALL EXPANSION JOINTS, SEE DETAIL 6/17.
3. LIGHT POLE SUPPORT PROVIDED BY BRIDGE SUPPLIER, SEE DETAIL 5/17. COORDINATE FINAL LOCATION WITH RESIDENT ENGINEER.
4. PROVIDE A PULL WIRE IN ALL CONDUITS FOR FUTURE USE.

CONDUIT LEGEND

1. 2#10, #10G., 3/4"C. (RGS) - BRIDGE LIGHTING.
2. 4#10, #10G., 3/4"C. (RGS) - BRIDGE LIGHTING AND USGS CABINET POWER.
3. 2#8 (LTG), 2#10, #10G., 1"C. (PVC) - BRIDGE LIGHTING AND USGS CABINET POWER.

ELECTRICAL LEGEND

- EXISTING POLE MOUNT LIGHT FIXTURE
- PROPOSED POLE MOUNT LIGHT FIXTURE
- —E— EXPOSED CONDUIT ON BRIDGE
- —EUG— UNDERGROUND CONDUIT - ELECTRIC

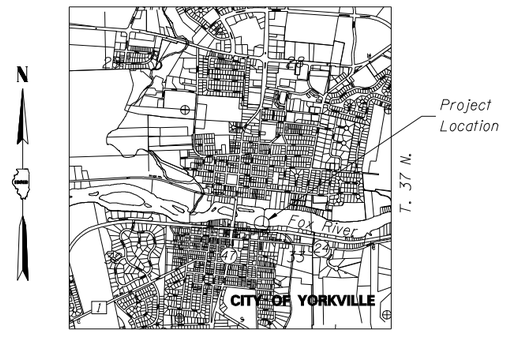
PAUL J. TURCZYN
062-42105
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXP. 11/30/2011

BILL OF MATERIAL

PAY ITEM	UNIT	QUANTITY
BRIDGE LIGHTING	L. SUM	1

LIGHTING FIXTURE SCHEDULE

FIXT. TYPE	DESCRIPTION	MANUFACTURER & CAT. NO.	LAMPS/ WATTS	VOLTS	MOUNTING	REMARKS
F1	HID CAGED ACORN GLOBE STYLE POLE MOUNTED LIGHTING FIXTURE, 18 INCH WIDE, 35 INCH TALL WITH A CLEAR TEXTURED ACRYLIC LENSE, CAST ALUMINUM FITTER, CAST ALUMINUM POLE BRACKET, CAST BALLAST HOUSING ASSEMBLY, HPF -20 DEG. F. CWA BALLAST, 4KV RATED PORCELAIN SOCKET, TYPE 3 OPTICS, BLACK POLYESTER POWDER COAT FINISH.	STERNBERG: 11130A/A/5P/ 478PM/ 100HPS120/ RE3G/BK	1-100W HPS, ANSI CODE NO. S54, 138 TOTAL INPUT WATTS	120	MOUNTED ON A 12'-0"H x 5" DIA. ROUND STRAIGHT FLUTED ALUMINUM POLE WITH DECORATIVE BASE AND SIDE SPIKED POLE CAP. STERNBERG POLE MODEL: 4212/ FP5/SSCC/BK	
F2	SAME AS TYPE F1 EXCEPT WITH 6'-0" HIGH POLE.	STERNBERG: 11130A/A/5P/ 478PM/ 100HPS120/ RE3G/BK	1-100W HPS, ANSI CODE NO. S54, 138 TOTAL INPUT WATTS	120	PROVIDE 10" DIA. BOLT CIRCLE FOR THIS POLE. STERNBERG POLE MODEL: 4206/ FP4/SSCC/BK	
F3	WALL MOUNTED HID LIGHT FIXTURE, DIE-CAST ALUMINUM HOUSING, POLYCARBONATE LENS, IP65 GASKETED ENCLOSURE, HPF -20 DEG. F. CWA BALLAST, BLACK FINISH	KENALL: MS15ED/S/MB/ 100S/1/120	1-100W HPS, ANSI CODE NO. S54, 138 TOTAL INPUT WATTS	120		SURFACE CONDUIT ENTRY FOR FIXTURE.



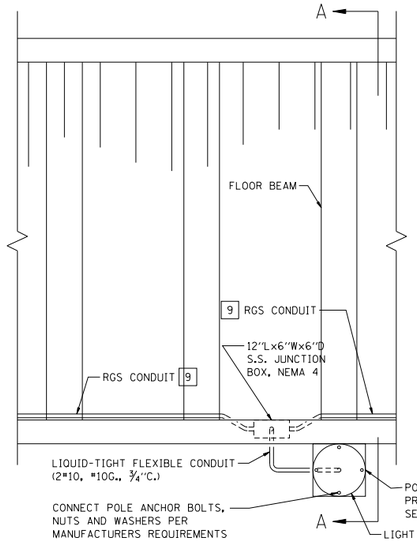
LOCATION SKETCH

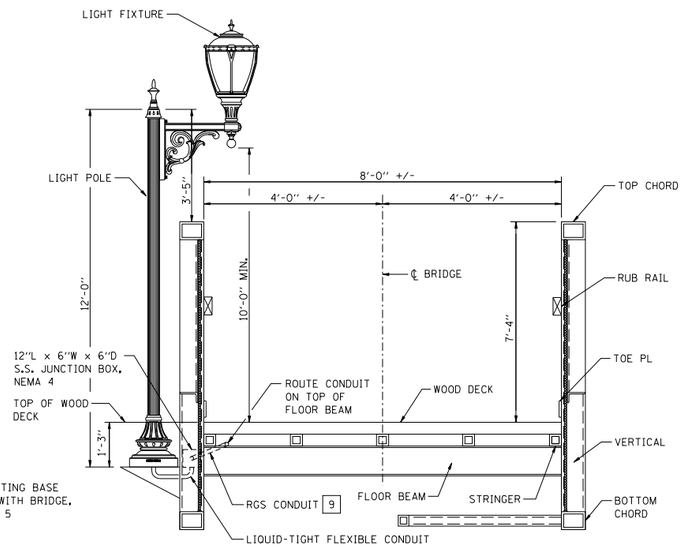
Designed By PJT Checked By RDW
Drawn By ANC Checked By PJT

2/14/2011 5:10:22 PM C:\OwrProjImpl\Projects\Yorkville Dam Phase 3\Plans DGN\Lighting Plan.dgn

2/14/2011 5:11:27 PM O:\OwrProjImpl\Projects\Yorkville Dam Phase 3\Plans DGN\Lighting Details.dgn

Designed By PJT Checked By RDW
Drawn By ANC Checked By PJT



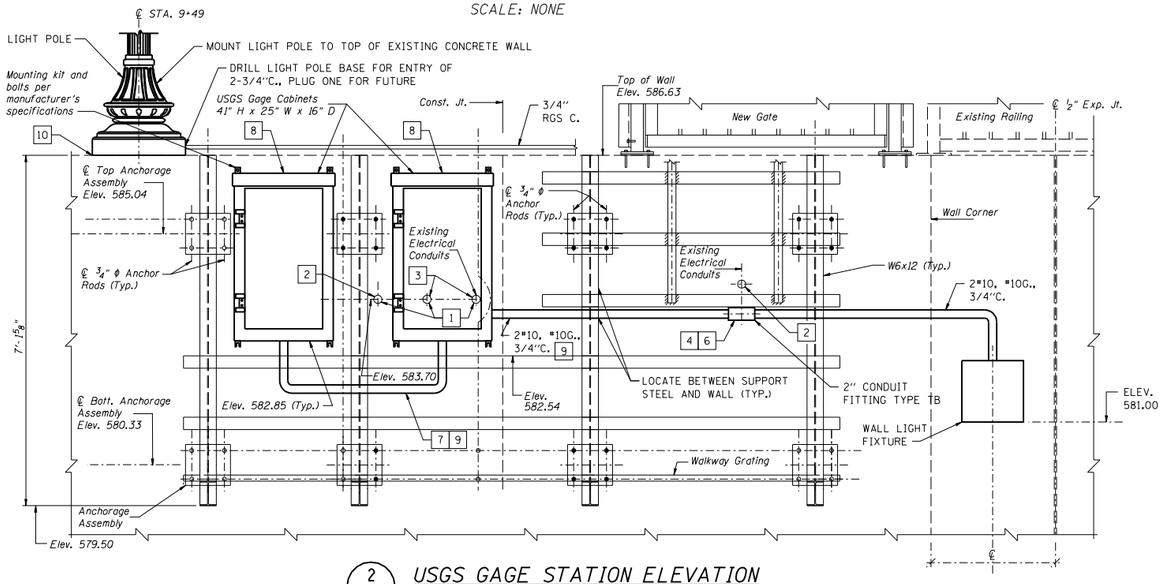


PLAN

SECTION A-A

1/17 PEDESTRIAN BRIDGE LIGHT FIXTURE MOUNTING DETAIL

SCALE: NONE



2/17 USGS GAGE STATION ELEVATION

SCALE: NONE

ELECTRICAL KEYED NOTES

1 EXISTING GAGE STATION CONDUITS (2" RGS).

2 CUTOFF CONDUIT AND CAP (3" FROM FACE OF WALL).

3 CUTOFF CONDUIT. PROVIDE TERMINATION BUSHING. PROVIDE CUTOUT IN BACK OF CABINET TO ACCEPT CONDUIT. PROVIDE WEATHERTIGHT SILICONE SEALANT AROUND CONDUIT.

4 EXISTING CONDUIT (2" RGS) FOR POWER CIRCUIT TO GAGE STATION CABINET. PROVIDE 2"-3/4"C. REDUCER FITTING AND COMPRESSION TRANSITION FITTING, AND CONNECT TO GAGE STATION CABINET WITH 1 1/4" LIQUID TIGHT FLEXIBLE CONDUIT.

5 CUTOFF CONDUIT AS CLOSE AS POSSIBLE TO FACE OF WALL.

6 EXISTING CONDUIT (2" RGS) FOR COMMUNICATIONS CIRCUIT TO GAGE STATION CABINET. PROVIDE 2"-1 1/4"C. REDUCER FITTING AND COMPRESSION TRANSITION FITTING, AND CONNECT TO GAGE STATION CABINET WITH 1 1/4" LIQUID TIGHT FLEXIBLE CONDUIT.

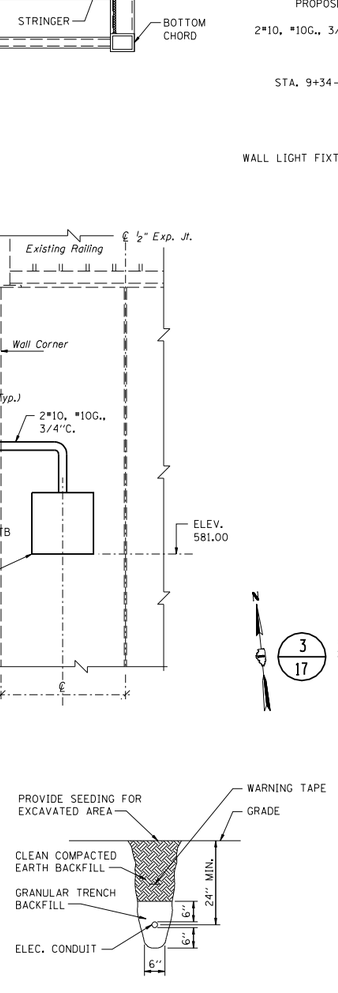
ELECTRICAL KEYED NOTES (CONTINUED)

7 PROVIDE 1 1/4" LIQUID TIGHT FLEXIBLE CONDUIT BETWEEN CABINETS.

8 GRIND OFF EXISTING WALL SURFACE TO PROVIDE SMOOTH MOUNTING FOR CABINETS.

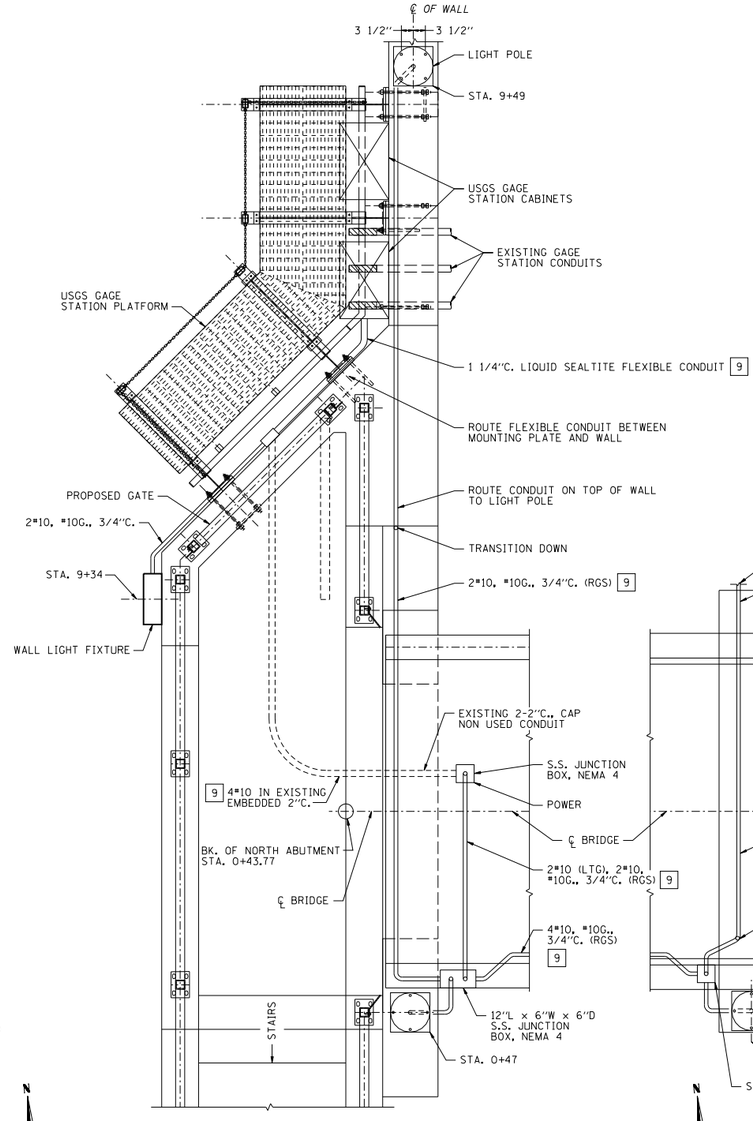
9 PROVIDE PULL WIRE IN ALL CONDUITS FOR FUTURE USE.

10 PROVIDE FOUR (4) ANCHOR BOLTS DRILLED INTO TOP OF CONCRETE WALL IN A 7"x7" SQUARE PATTERN (10" DIA. BOLT CIRCLE). ANCHOR BOLTS SHALL BE HILTI "HIT-HY 150MAX+HAS, 1/2" DIA. GALVANIZED WITH 6" EMBEDMENT. LENGTH OF ANCHOR BOLT ABOVE TOP OF CONCRETE TO MATCH LIGHT POLE MANUFACTURER REQUIREMENTS FOR ANCHOR BOLTS. BOLT PATTERN SHALL BE PARALLEL TO FACE OF WALL. VERIFY LOCATION OF EXISTING REINFORCEMENT IN WALL WITH ENGINEER.



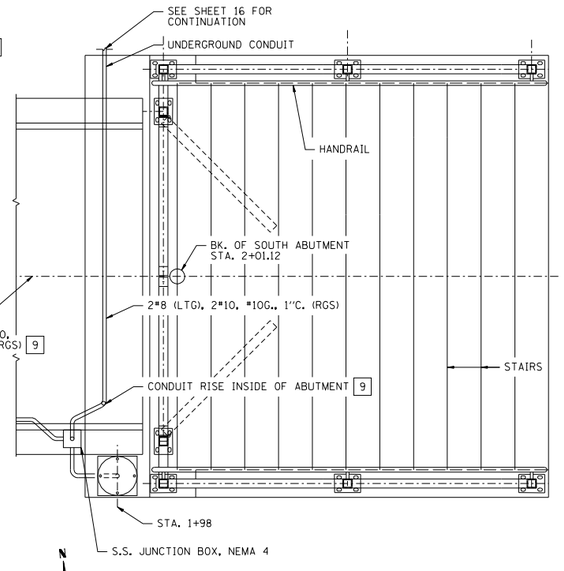
5/17 TRENCH DETAIL

SCALE: NONE



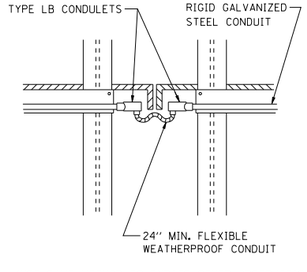
3/17 STAIR AND LANDING PLAN - NORTH ABUTMENT

SCALE: NONE



4/17 STAIR PLAN - SOUTH ABUTMENT

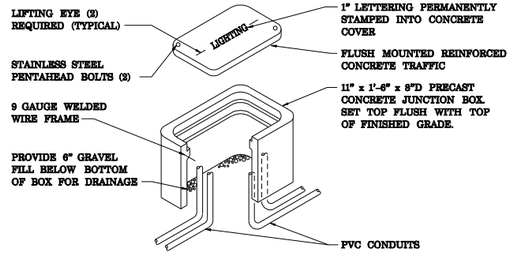
SCALE: NONE



(USE SAME METHOD TO BYPASS OTHER OBSTRUCTIONS.)

6/17 EXPANSION JOINT DETAIL

SCALE: NONE



7/17 HANDHOLE DETAIL

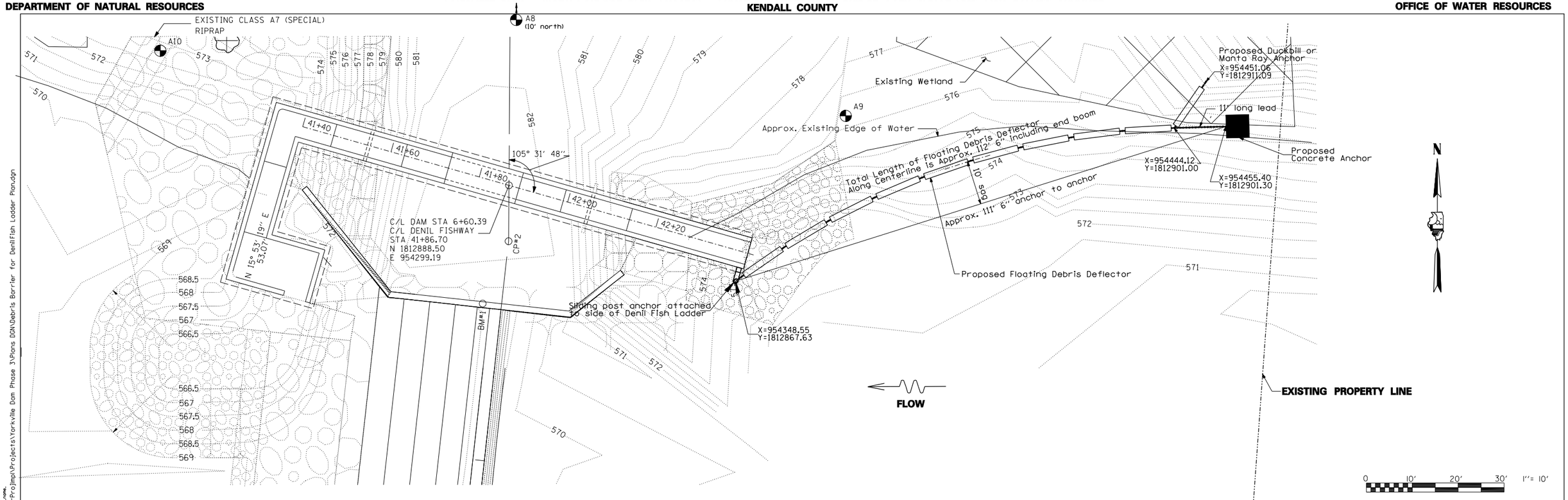
SCALE: NONE

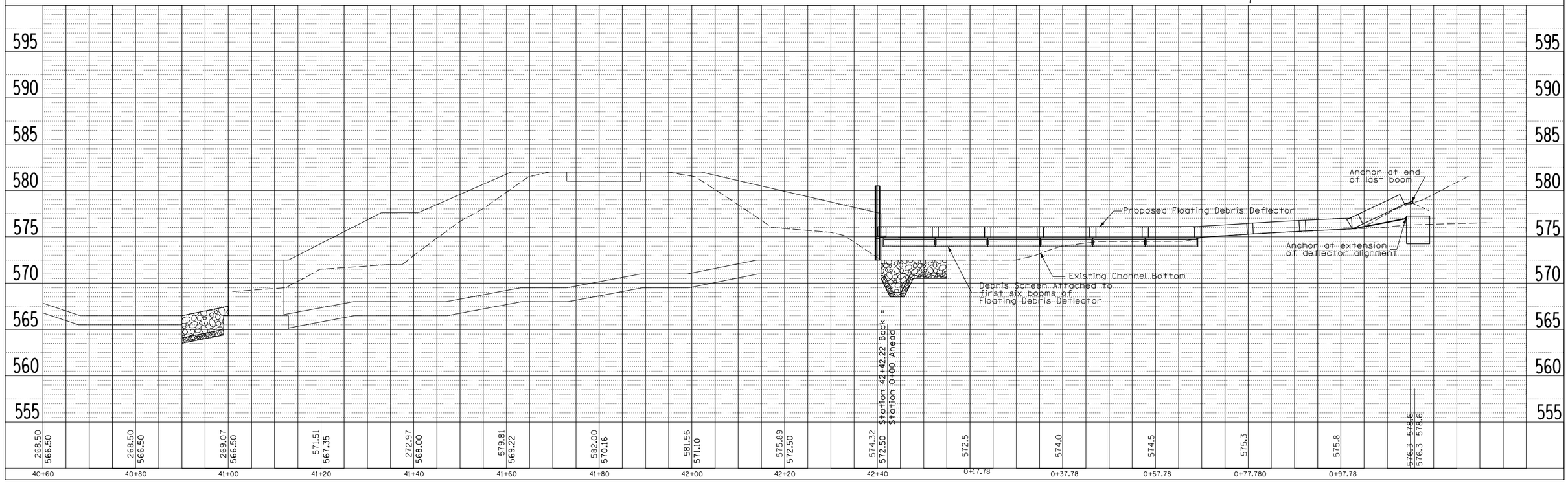
PAUL J. TURCZYN 062-42105 LICENSED PROFESSIONAL ENGINEER STATE OF ILLINOIS
EXP. 11/30/2011

STATE OF ILLINOIS
DEPARTMENT OF NATURAL RESOURCES

YORKVILLE DAM – MULTI-PURPOSE DAM PROJECT – PHASE 3 – PEDESTRIAN BRIDGE OVER CANOE AND FISH BYPASS CHANNEL
KENDALL COUNTY

OFFICE OF WATER RESOURCES





DESIGNED BY: GMS CHECKED BY: TMM
DRAWN BY: GMS CHECKED BY: TMM

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DEBRIS DEFLECTOR FOR DENIL FISH LADDER PLAN **FR-430** **Sheet 18 of 19**

THIS SHEET IS CURRENTLY BEING DESIGNED AND WILL BE ISSUED AS AN ADDENDUM