The following drawing index sheet and reference drawings have been added to Volume 3.

The fellething drawing index on	oot and roloronoo arawingo navo	boon added to t
DELETE	ADD	DESCRIPTION
	G-002 AM2	
G-002		New
G-003	G-003 AM2	New
N/A	G-003C AM2	New
N/A	G-003D AM2	New
A09-A-102	A09-A-102 AM2	New
A09-A-301	A09-A-301AM2	New
N/A	A09-T-001 AM2	New
N/A	A09-T-002 AM2	New
A10-A-500	A10-A-500AM2	New
A10-E-001	A10-E-001 AM2	New
A10-E-101 (Part 1)		New
A10-E-101 (Part 2)	A10-E-101 (Part 2) AM2	New
A10-FP-101	A10-FP-101 AM2	New
A10-G-101A	A10-G-101A AM2	New
A10-G-102A	A10-G-102A AM2	New
A10-S-201	A10-S-201 AM2	New
A10-S-202	A10-S-202 AM2	New
A10-S-303A	A10-S-303A AM2	New
A10-S-501A	A10-S-501A AM2	New
A10-S-505A	A10-S-505A AM2	New
A10-S-506A	A10-S-506A AM2	New
A10-0-300A	A10-0-300A AIVIZ	INCW
A44 A 400	A44 A 400 AB40	Maria
A11-A-100	A11-A-100 AM2	New
A11-A-101	A11-A-101 AM2	New
A11-A-102	A11-A-102 AM2	New
A11-A-103	A11-A-103 AM2	New
A11-A-150	A11-A-150 AM2	New
A11-A-500	A11-A-500 AM2	New
A11-A-501	A11-A-501 AM2	New
A11-A-502	A11-A-502 AM2	New
A11-A-503	A11-A-503 AM2	New
A11-A-552	A11-A-552 AM2	New
	,	
A11-E-001	A11-E-001 AM2	New
A11-E-100	A11-E-100 AM2	New
A11-E-202	A11-E-202 AM2	New
A11-E-501	A11-E-501 AM2	New
A11-M-350	A11-M-350 AM2	New
A13-S-001	A13-S-001 AM2	New
A13-S-108	A13-S-108 AM2	New
A13-S-300	A13-S-300 AM2	New
A13-S-301	A13-S-301 AM2	New
A13-S-302	A13-S-302 AM2	New
A13-S-500	A13-S-500 AM2	New
A13-S-501	A13-S-501 AM2	New
7110 0 001	7110 0 00171112	11011
O 4 (Dart C MTA)	O 4 AMO (D-++ C MTA)	Marri
S-1 (Part 6 MTA)	S-1 AM2 (Part 6 MTA)	New
S-4 (Part 6 MTA)	S-4 AM2 (Part 6 MTA)	New
S-6 (Part 6 MTA)	S-6 AM2 (Part 6 MTA)	New
S-8 (Part 6 MTA)	S-8 AM2 (Part 6 MTA)	New
S-10 (Part 6 MTA)	S-10 AM2 (Part 6 MTA)	New
S-11 (Part 6 MTA)	S-11 AM2 (Part 6 MTA)	New
G-11 (Latto MIA)	O-11 AIVIZ (FAIL O IVITA)	IACAA
T-E-001	T-E-100 AM2	New
T-E-100	T-E-100 AM2	New

T-E-101 T-E-102 T-E-103 T-E-104 T-E-105 T-E-106 T-E-107 T-E-108 T-E-109 T-E-113	T-E-101 AM2 T-E-102 AM2 T-E-103 AM2 T-E-104 AM2 T-E-105 AM2 T-E-106 AM2 T-E-107 AM2 T-E-108 AM2 T-E-109 AM2 T-E-113 AM2	New
T-E-113	T-E-113 AM2	New
T-E-500	T-E-500 AM2	New

PART 2: REFERENCE DRAWINGS

N/A	A10-E-100	New
N/A	A10-E-611	New
N/A	A10-E-612	New
N/A	A10-E-613	New
N/A	A10-E-614	New
N/A	A10-E-620	New

PART 1: REFERENCE DRAWINGS

NI/A	EA40 E 40	Name
N/A	FA10-E-12	New
N/A	FA10-E-13	New
N/A	FA10-E-14	New
N/A	FA10-E-15	New
N/A	FA10-E-16	New
N/A	FA10-E-17	New
N/A	FA10-E-52	New
N/A	FA10-E-66	New
N/A	FA10-E-67	New
N/A	FA10-E-68	New
N/A	FA10-E-69	New
N/A	FA12-E-5	New
N/A	FA12-E-6	New
N/A	FA12-E-7	New
N/A	FA12-E-8	New
N/A	FA12-E-10	New
N/A	FA12-E-13	New
N/A	FA12-E-14	New
N/A	FA12-E-15	New
N/A	FA12-E-18	New
N/A	FA12-E-41	New
N/A	FA12-E-142	New
N/A	FA12-E-65	New
N/A	FA12-E-66	New
N/A	FA12-E-67	New
N/A	FA12-E-68	New
N/A	FA12-E-69	New
N/A	FA12-E-70	New
N/A	FA12-E-71	New
N/A	FA12-E-72	New
N/A	FA12-E-73	New
N/A	FA12-E-74	New
N/A	FA12-E-75	New
N/A	FA12-E-76	New
N/A	FA12-E-77	New
N/A	FA12-E-77	New
IN/A	FA12-E-10	INEW

PART 6: REFERENCE DRAWINGS DESIGN OF NEW STAIR FOR BETHESDA STATION - CONTRACT NO. 13-FQ1 0060-MCAP-19

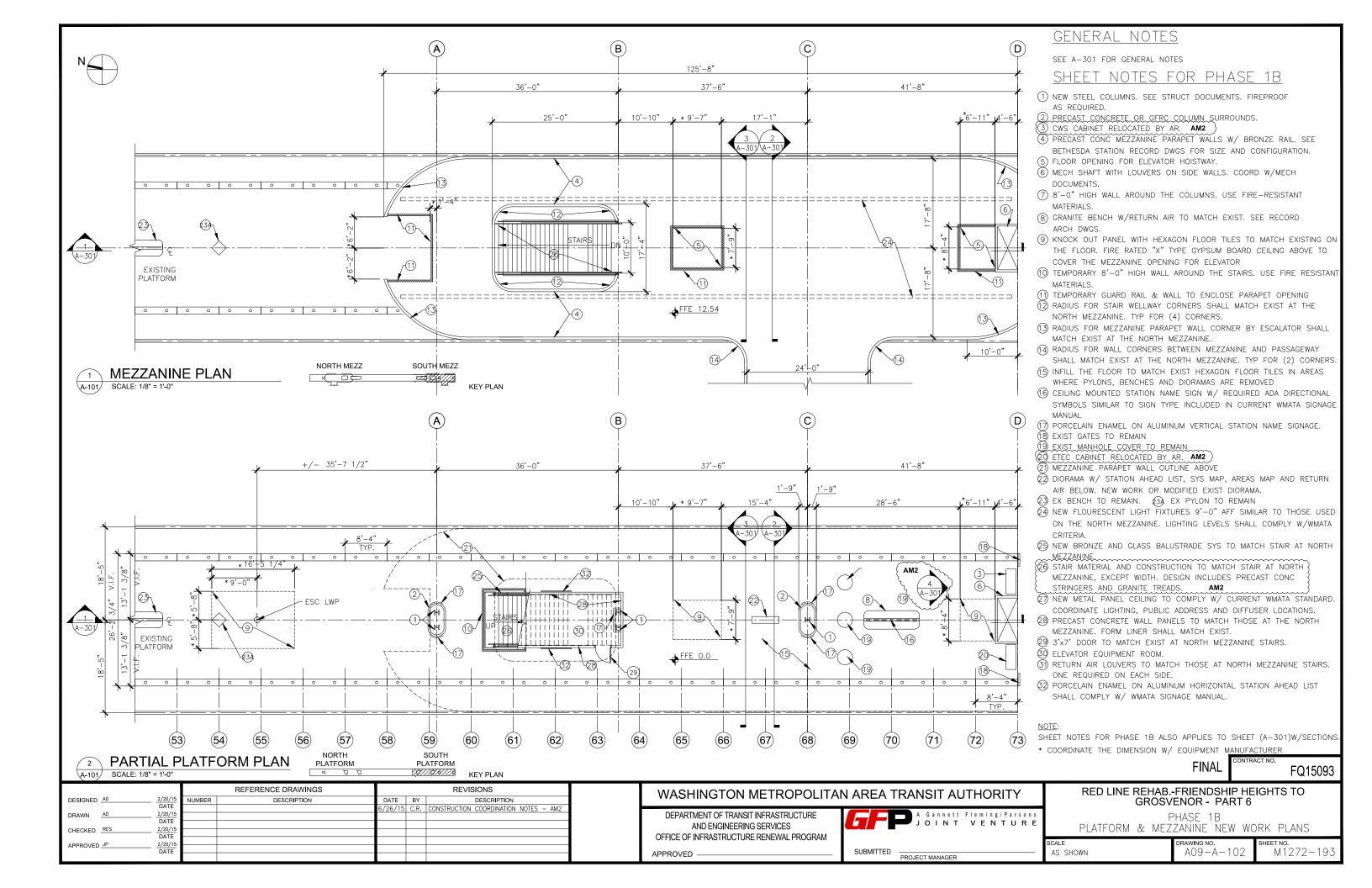
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N/A	G-002	New
N/A	A-001	New
N/A	A-002	New
N/A	A-100	New
N/A	A-200	New
N/A	A-300	New
N/A	A-301	New
N/A	S-001	New
N/A	S-100	New
N/A	S-101	New
N/A	S-102	New
N/A	S-200	New
N/A	S-201	New
N/A	S-202	New
N/A	S-203	New
N/A	S-300	New
N/A	S-301	New
N/A	E-001	New
N/A	E-100	New
N/A	E-101	New
N/A	E-102	New
N/A	E-600	New
N/A	E-601	New

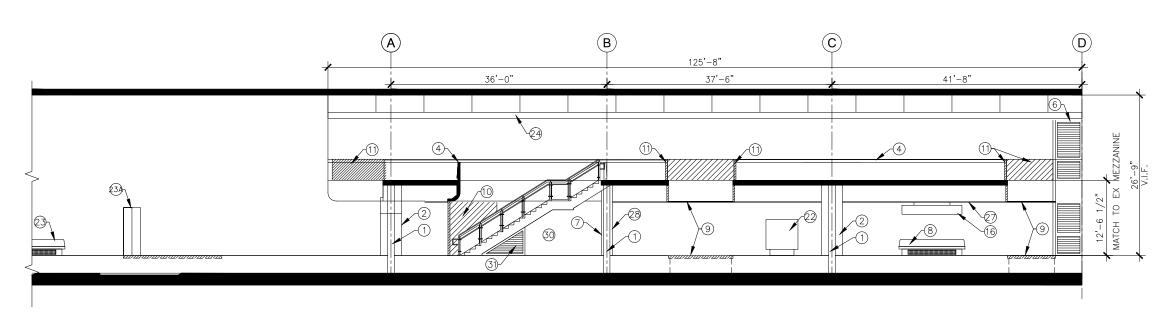
PART 3: REFERENCE DRAWINGS

A13-U-7	New
A13-U-66	New
A13-U-8	New
A13-U-9	New
A13-U-10	New
A13-U-11	New
A13-S-57	New
A13-S-1	New
A13-S-20	New
A13-S-22	New
A13-S-2	New
A13-S-3	New
A13-S-4	New
A13-S-34	New
A13-S-36	New
A13-S-37	New
A13-S-83	New
A13-S-42	New
A13-S-86	New
A13-S-58	New
A13-S-59	New
A13-S-19	New
A13-S-43	New
	A13-U-66 A13-U-8 A13-U-9 A13-U-10 A13-U-11 A13-S-57 A13-S-1 A13-S-20 A13-S-22 A13-S-2 A13-S-3 A13-S-4 A13-S-36 A13-S-37 A13-S-36 A13-S-37 A13-S-83 A13-S-42 A13-S-83 A13-S-59 A13-S-59 A13-S-59

N/A	A13-S-17	New
N/A	A13-S-90	New
N/A	A13-S-6	New
	A13-S-5	
N/A		New
N/A	A13-S-91	New
N/A	A13-S-49	New
N/A	A13-S-40	New
N/A	A13-S-44	New
N/A	A13-S-173	New
N/A	A13-S-174	New
N/A	A13-S-175	New
N/A	ST-S-1	New
N/A	ST-S-4	New
N/A	ST-S-6	New
N/A	ST-S-7	New
N/A	ST-S-9	New
N/A	A13-S-172	New
N/A	A13-S-16	New
N/A	A13-S-14	New
N/A	A13-S-15	New
N/A	A13-S-18	New
N/A	A13-S-21	New
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N/A	A13-S-10	New
N/A	A13-S-10	
		New
N/A	A13-S-12	New
N/A	A13-S-13	New
N/A	A13-S-140	New
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	A13-S-40	
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N/A	A13-S-30	New
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N/A	A13-S-26	New
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N/A	A13-S-24	New
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N/A	A13-S-121	New
N/A	A13-S-191	New
N/A	A13-S-92	New
N/A	A13-S-106	New

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N/A	A13-S-131	New
N/A	A13-S-148	New
N/A	A13-S-159	New
N/A	A13-S-149	New
N/A	A13-S-1 4 9 A13-S-150	New
N/A N/A	A13-S-130 A13-S-137	New
N/A	A13-S-138	New
N/A	A13-S-134	New
N/A	A13-S-129	New
N/A	A13-S-138	New
N/A	A13-S-136	New
N/A	A13-S-147	New
N/A	A13-S-160	New
N/A	A13-S-135	New
N/A	A13-S-130	New
N/A	A13-S-142	New
N/A	A13-S-143	New
N/A	A13-S-164	New
N/A	A13-S-154	New
N/A	A13-S-166	New
N/A	A13-S-84	New
N/A	A13-S-88	New
N/A	A13-S-93	New
N/A	A13-S-80	New
N/A	A13-S-120	New
N/A	A13-S-122	New
N/A	A13-S-7	New
N/A	A13-S-60	New
N/A	A13-S-105	New
N/A	A13-S-104	New
N/A	A13-S-104 A13-S-103	New
N/A N/A	A13-S-103 A13-S-79	New
N/A N/A	A13-S-79 A13-S-78	New
N/A	A13-S-77	New
N/A	A13-S-76	New
N/A	A13-S-110	New
N/A	A13-S-111	New
N/A	A13-S-109	New
N/A	A13-S-112	New
N/A	A13-S-113	New
N/A	A13-S-152	New
N/A	A13-S-153	New
N/A	A13-S-73	New
N/A	A13-S-74	New
N/A	A13-S-75	New
N/A	A13-S-161	New
N/A	A13-S-168	New
N/A	A13-S-169	New
N/A	A13-S-67	New
N/A	A13-S-96	New
N/A	A13-S-101	New
N/A	A13-S-69	New
N/A	A13-S-155	New
N/A	A13-S-156	New
N/A	A13-S-162	New
N/A	A13-S-170	New
N/A	A13-S-171	New
-		





GENERAL NOTES

- 1. VERIFY ALL DIMENSIONS IN THE FIELD.
- 2. VERIFY ALL FIELD CONDITIONS.
- 3. ALL DIMENSIONS ARE NOMINAL UNLESS NOTED OTHERWISE.
- 4. ALL WORK WILL BE COMPLETED IN ACCORDANCE WITH THE LATEST VERSIONS OF I.B.C. AND LIFE SAFETY CODES. ALL WORK IS DESIGNED AND SHALL BE CONSTRUCTED IN ACCORDANCE W/ WMATA DESIGN CRITERIA, VERSION 9.
- 5. DO NOT SCALE DWGS FOR PURPOSES OF FINAL DESIGN
- 6. DEMOLITION, CUTTING, AND PATCHING OF ANY MATERIALS OR FIXTURES REQUIRED TO CONSTRUCT THE PROJECT IS HEREIN MADE A PART OF THESE DOCUMENTS.
- 7. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AS REQUIRED.
- 8. THE IMAGES ON THE CONSTRUCTION DOCUMENT FLOOR PLANS REFLECT THE INFORMATION FROM THE ORIGINAL CONSTRUCTION DOCUMENTS FOR THE PROJECT, IT IS NOT AN INDICATION OF NEW WORK, IT IS SHOWN IN GRAY LINE COLOR. THE NEW WORK AND REQUIRED DEMOLITION OR REMOVALS ARE SHOWN IN BLACK LINE COLOR. IF THE DIFFERENCE IS NOT OBVIOUS, REPORT TO THE A.R. IMMEDIATELY.
- 9. ALL WORK INDICATED OR SHOWN GRAPHICALLY AS "EXIST (EXISTING) TO REMAIN" WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND WORK AROUND WITHOUT DISTURBING. IF DAMAGED, THE CONTRACTOR WILL REPLACE AT NO ADDITIONAL COST TO THE OWNER.
- 10. FIREPROOF ALL NEW STRUCT STEEL, INCLUDING, BUT NOT LIMITED TO COLUMNS, BEAMS, METAL DECK, AND MISCELLANEOUS METALS - SEE SPECIFICATION SECTION 07.81.00.
- 11. FORMWORK FOR PRECAST CONCRETE TO MATCH FORMWORK USED AT THE NORTH MEZZANINE

SHEET NOTES

SEE A-102 FOR "SHEET NOTES FOR PHASE 1B" (X)

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 17668, EXPIRATION DATE: 03-27-2016"

AM2 **END WALL ELEVATION**

A-301

LONGITUDINAL SECTION - PHASE 1B

TRANSVERSE SECTION - PHASE 1B

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

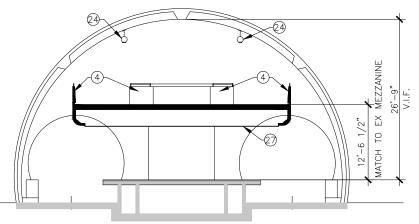
SCALE: 1/8" = 1'-0"

SCALE: N.T.S.

APPROVED

A-301





TRANSVERSE SECTION - PHASE 1B A-301/ SCALE: 1/8" = 1'-0"

FINAL

FQ15093

REFERENCE DRAWINGS REVISIONS DESCRIPTION DESIGNED AD DATE BY NUMBER /26/15 C.R. CONSTRUCTION COORDINATION NOTES - AM2 DRAWN CHECKED RES 2/20/15 DATE 2/20/15 DATE APPROVED JP



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM



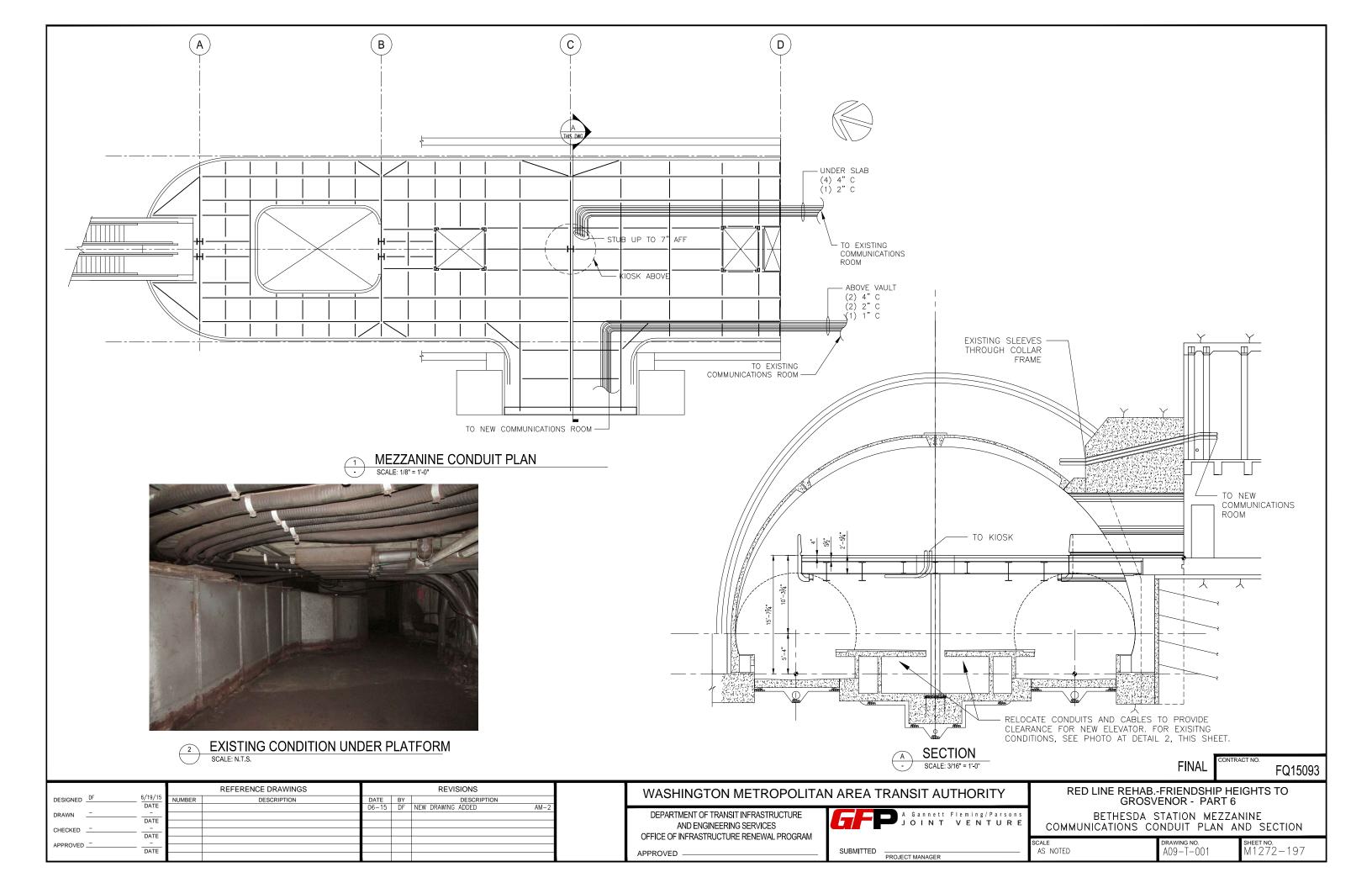
PROJECT MANAGER

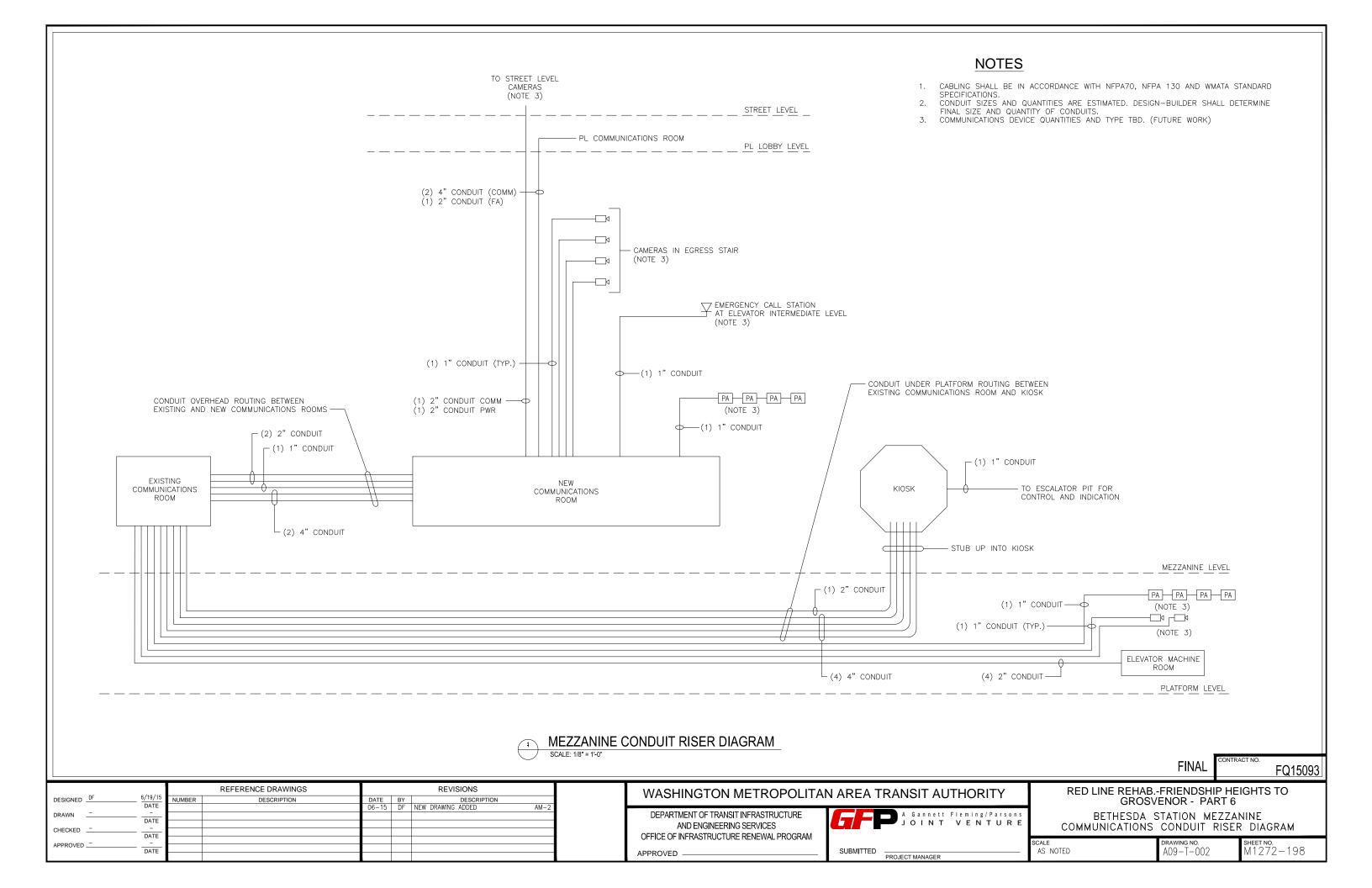
RED LINE REHAB.-FRIENDSHIP HEIGHTS TO **GROSVENOR - PART 6**

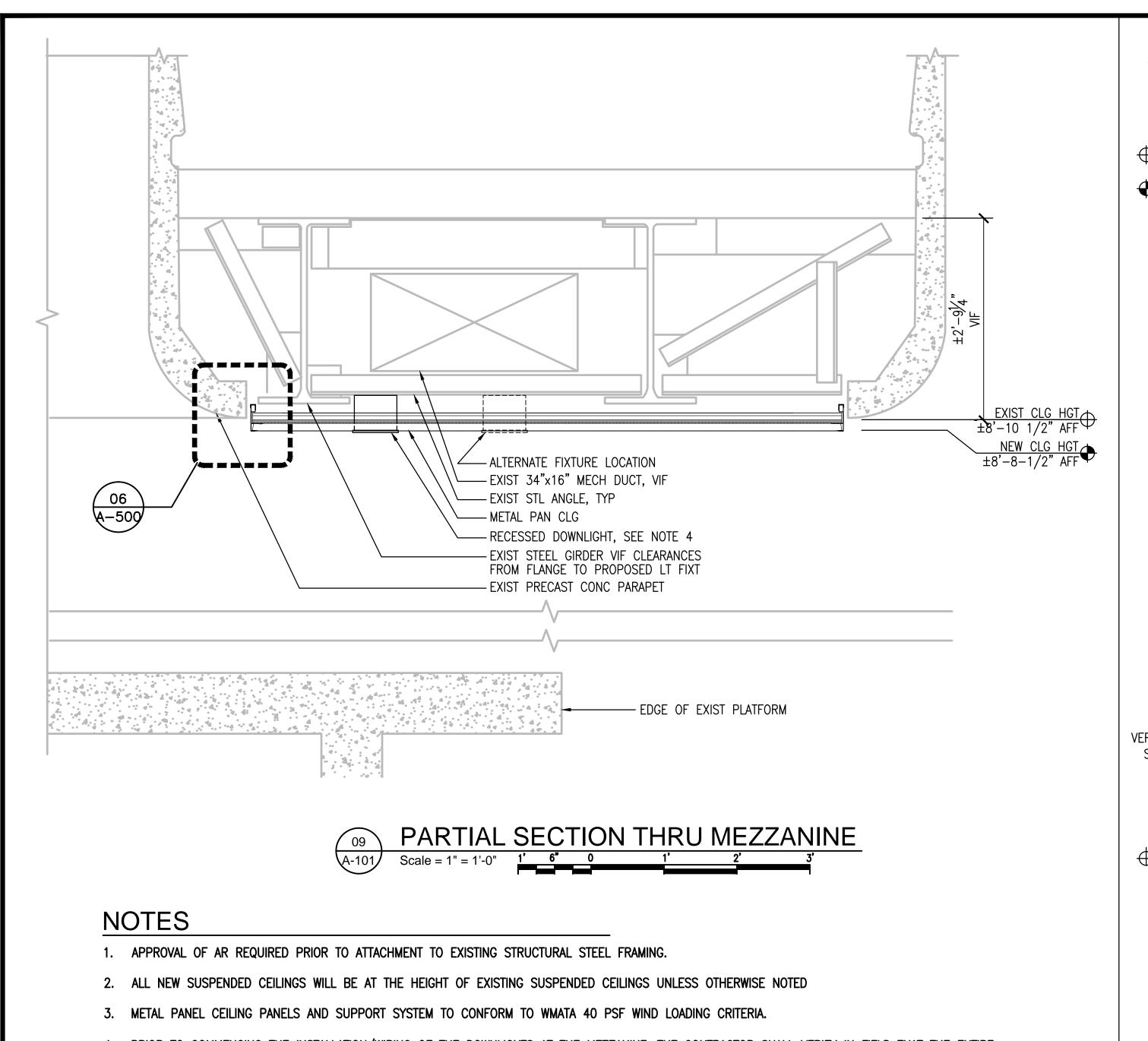
PHASE 1B SECTIONS

A09-A-301 AS SHOWN

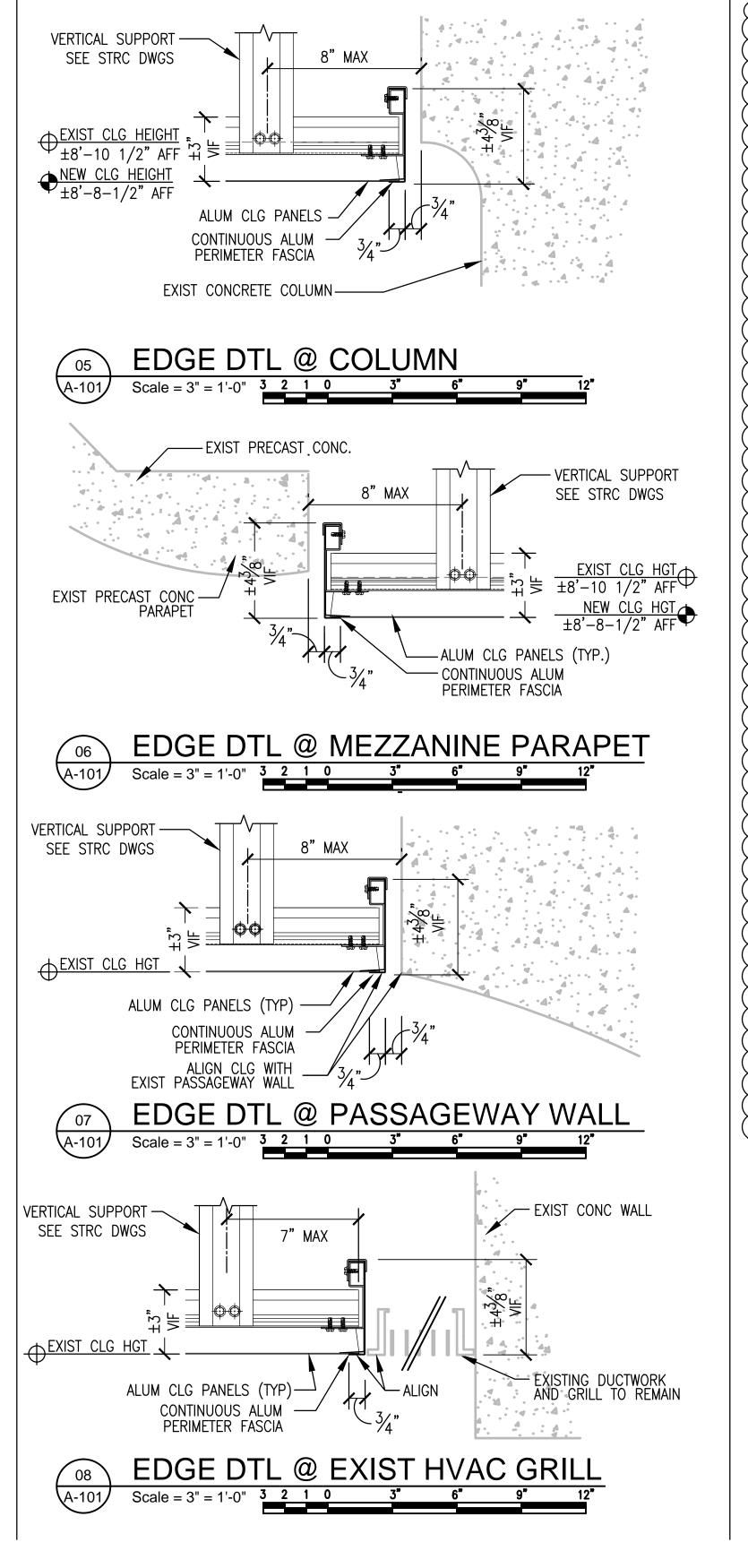
M1272-195

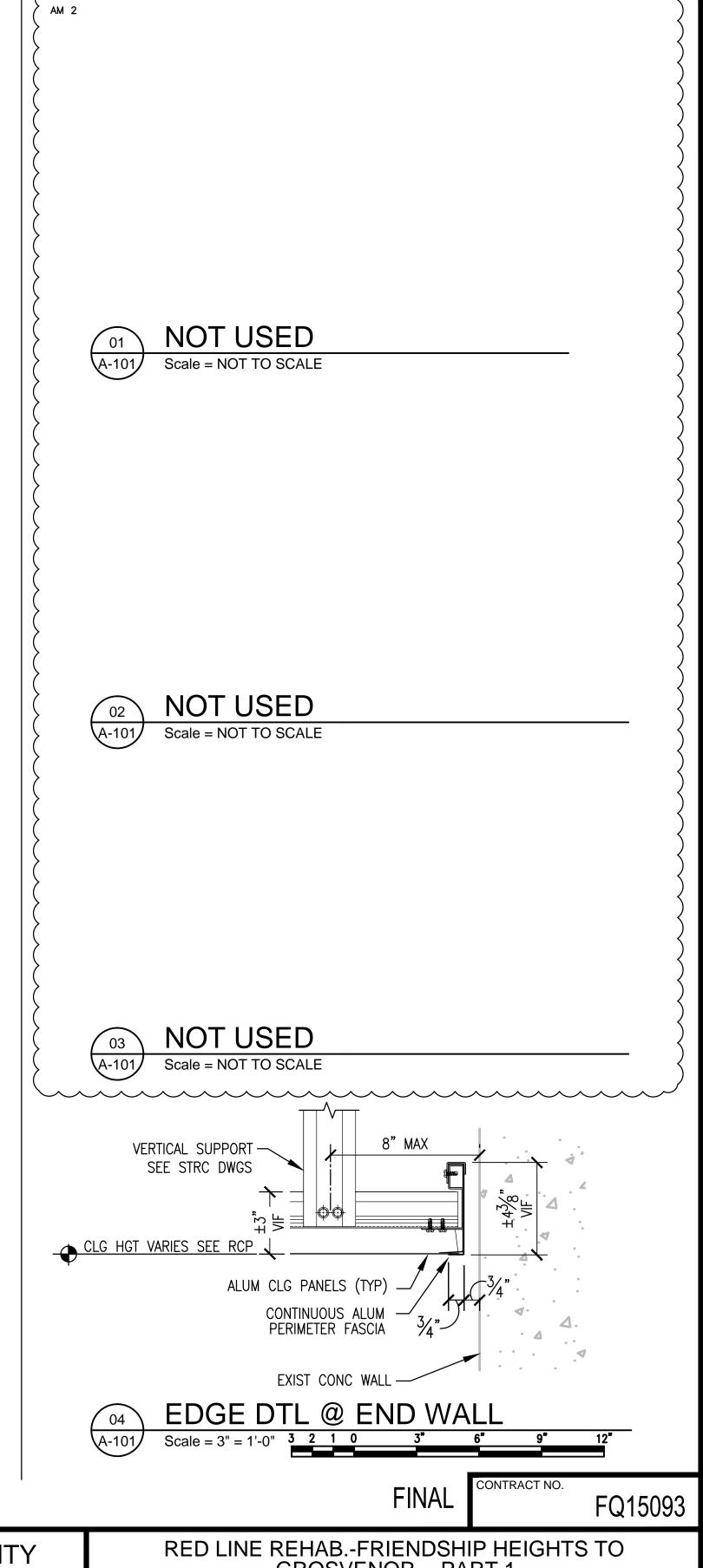






- 4. PRIOR TO COMMENCING THE INSTALLATION/WIRING OF THE DOWNLIGHTS AT THE MEZZANINE, THE CONTRACTOR SHALL VERIFY IN FIELD THAT THE ENTIRE PROPOSED OUTSIDE ROWS OF RECESSED DOWNLIGHTS CAN BE INSTALLED WITHOUT CONFLICTING WITH THE EXISTING STRUCTURE. IF UPON VERIFICATION THERE WILL BE A CONFLICT, THE CONTRACTOR SHALL DETERMINE CLEARANCE OF ALTERNATIVE FIXTURE LOCATION AND NOTIFY THE AR.
- 5. SEE DETAILS 1-5/A10-S-500 FOR METAL PAN CEILING STRUCTURAL SUPPORT DETAILS.
- 6. ALL DETAILS BACK REFERENCE DRAWINGS WITH PREFIX A10.
- 7. REFER TO STRUCTURAL DWGS A10-S-303 & A10-S-304 FOR ADDITIONAL INFORMATION REGARDING THE EXISTING CEILING CAVITIES.
- 8. ALL STEEL TO ALUMINUM CONNECTIONS SHALL BE PROVIDED WITH A DIELECTRIC SEPARATION
- 9. ALL ALUMINUM CEILING PANELS AND FASCIAS SHALL BE PRE-PAINTED WMATA WHITE
- 10. CONTRACTOR SHALL VERIFY IN FIELD THE DEPTH OF THE NEW CEILING PERIMETER TRIM
- 11. CONTRACTOR SHALL INSTALL THE NEW METAL PAN CEILING AT THE PLATFORM MEZZANINE EXACTLY 2" LOWER THAN ITS EXISTING POSITION.





REFERENCE DRAWINGS

DESIGNED CF

DATE

DATE

DRAWN CF

DATE

CHECKED JT

APPROVED JP

DATE



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
APPROVED



RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR - PART 1 METAL PAN CEILING DETAILS - I

AS SHOWN

AS SHOWN

DRAWING NO.

A10-A-500

SHEET NO.

M1272-009

SCOPE OF ELECTRICAL WORK

1. REMOVE EXISTING AND PROVIDE NEW PASSAGEWAY AND UNDERSIDE OF MEZZANINE LIGHTING.

2. DISCONNECT AND TEMPORARILY REMOVE CCTV CAMERAS, CEILING MOUNTED SPEAKERS AND MISCELLANEOUS EQUIPMENT RE-INSTALL AND RECONNECT AFTER CEILING RENOVATION WORK IS COMPLETE.

ABBREVIATIONS

AVENUE AVE. **BLVD BOULEVARD** BRKR. **BREAKER**

CB **CIRCUIT BREAKER**

CRS CONTACT RAIL SCHEMATIC

DR. DRIVE

EASTBOUND EΒ

EMERG EMERGENCY

EQN **EQUATION**

FDR #1 FEEDER CIRCUIT BREAKER

NUMBER IN SUBSTATION

HGTS HEIGHTS

HIGHWAY HWY

I.B. **INBOUND**

LOR LENGTH OF RAIL

LOCR LENGTH OF CONTACT RAIL

NOT IN CONTRACT

NEGATIVE, NORTH

OPER. **OPERATION**

O.B. OUTBOUND

(N.I.C.)

POINT OF INTERSECTION P.I.T.O **OF TURNOUT**

POSITIVE

ROAD

SQUARE SQ.

STA. STATION

STREET ST.

TPSS TRACTION POWER SUBSTATION

TBS TIE BREAKER STAION

TIE CIRCUIT BREAKER NUMBER IN TIE BREAKER STATION

YARD ΥD

YLT YARD LEAD TRACK

YARD LEAD

SYMBOLS

DOWNLIGHT, NORMAL POWER

DOWNLIGHT, EMERGENCY POWER

CCTV CAMERA

CEILING MOUNTED SPEAKER

DOWNLIGHT, WALL WASHER

JUNCTION BOX ABOVE CEILING

STATION LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMPS	MANUFACTURER	MOUNTING
A1	6" ROUND RECESSED DOWN LIGHT; LED, WIDE DISTRIBUTION 120/277V	LED 35K 1400 LUMENS	GOTHAM EVO-35-14-6AR-WD-LS-MVOLT 25WATTS	METAL CEILING PANEL RECESSED
A2	RETROFIT RECESSED LED DOWNLIGHT, SUITABLE FOR RECESSED MOUNTING IN CONCRETE CEILING	LED 35K 1800 LUMENS	GOTHAM EVO-R-35-18-6AR-WD-LS 27WATTS	CONCRETE CEILING RECESSED
А3	6" ROUND RECESSED WALLWASHER DOWN LIGHT; LED, 120/277V	LED 35K 1000 LUMENS	GOTHAM EVO-WW-35-10-6AR-LS-MVOLT 18WATTS	METAL CEILING PANEL RECESSED
В	8" ROUND DOWNLIGHT	35K 1500 LUMENS	LITHONIA DOM8LED-1500L-35K-277-DOAZ 35.8WATTS	METAL CEILING PANEL RECESSED

GENERAL NOTES

- CONTRACTOR SHALL CONTACT WMATA AR (AUTHORITY REPRESENTATIVE) TO DEFINE ACCEPTABLE WORKING HOURS, SPACE FOR STORAGE OF MATERIALS, PARKING, ETC.
- 2. ALL MATERIALS PROVIDED SHALL BE UL LISTED, NEW AND CONFORM TO CONTRACT SPECIFICATIONS, DRAWINGS AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- 3. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF ALL LOCAL CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION OVER THE WORK.
- 4. THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL CONTRACT DRAWINGS/SPECIFICATIONS AND BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIALS AND EQUIPMENT AT EACH LOCATION AS INDICATED. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND THEY DO NOT INDICATE ALL PULL BOXES, OFFSETS, FITTINGS AND ACCESSORIES AS MAY BE REQUIRED. FURNISHING SUCH MATERIALS AS REQUIRED TO MEET FIELD CONDITIONS AND NEC REQUIREMENTS SHALL BE AT NO ADDITIONAL COST TO THE AUTHORITY.
- 5. THE CONTRACTOR SHALL EXAMINE THE SITE AND OBSERVE THE CONDITIONS UNDER WHICH THE WORK SHALL BE DONE OR OTHER CIRCUMSTANCES WHICH WILL AFFECT THE CONTEMPLATED WORK PRIOR TO SUBMITTING A BID. ANY REQUESTED VARIANCE TO THESE CONTRACT DOCUMENTS SHALL BE SUBMITTED AS PART OF THE BID. ANY VARIANCE REQUIRED FOR FIELD CONDITIONS IDENTIFIED AFTER THE BID PERIOD WILL BE RESPONSIBILITY OF CONTRACTOR.
- 6. INDICATED DIMENSIONS OF EQUIPMENT ARE APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE FINAL VERIFICATION OF ALL MEASUREMENTS SO THAT THE NEW EQUIPMENT CAN BE MANUFACTURED TO RETROFIT **EXISTING CONDITIONS.**
- 7. THE CONTRACTOR SHALL ONLY WORK ON DE-ENERGIZED EQUIPMENT. ALL OUTAGES SHALL BE COORDINATED WITH WMATA AR.
- 8. CONTRACTOR SHALL TAKE PROPER ACTION TO SECURE AND PROTECT THE OPERATIONAL EQUIPMENT IN THE STATION OR FACILITY DURING CONTRACTOR'S WORK, TO PREVENT DAMAGE OR SHUT DOWN OF EQUIPMENT.
- CONTRACTOR SHALL PROTECT EXISTING ELECTRICAL EQUIPMENT TO REMAIN FROM DUST AND WATER DURING CONTRACTOR'S WORK.
- 10. ALL NEW EQUIPMENT TO BE INSTALLED SHALL BE STORED PROPERLY. EQUIPMENT DAMAGED DURING SHIPPING, HANDLING, STORAGE, WATER OR OTHER CAUSES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
- 11. CONTRACTOR SHALL TEMPORARILY STORE THE EXISTING REMOVED EQUIPMENT UNTIL ITS REMOVAL. ANY STAGING AREA INSIDE THE FACILITY SHALL BE ESTABLISHED TO AVOID OBSTRUCTION TO EXISTING ELECTRICAL EQUIPMENT WITH LOCATION APPROVED BY WMATA AR. COORDINATE WITH THE AR TO DETERMINE WHETHER EQUIPMENT SHALL BE RETURNED TO WMATA OR DISPOSED OF BY CONTRACTOR
- 12. INTERRUPTION OF SERVICE TO EQUIPMENT TO REMAIN SHALL BE KEPT TO A MINIMUM, SHALL OCCUR ONLY IN METRO NON-REVENUE HOURS AND SHALL BE COORDINATED WITH WMATA AR AT LEAST TWO WEEKS PRIOR TO THE REQUIRED OUTAGE.

- 13. CONTRACTOR SHALL OBTAIN & BECOME FAMILIAR WITH WMATA'S SAFETY AND OPERATING PROCEDURES & RULES SAFETY TRAINING & CERTIFICATION FOR ALL CONTRACTOR EMPLOYEES ON THE WORK SITE IS MANDATORY.
- 14. A CLEAR AND UNOBSTRUCTED PATHWAY FROM TRACK TO STREET SHALL BE MAINTAINED AT ALL TIMES FOR PERSONNEL ACCESS. CONTRACTOR SHALL PROHIBIT SUCH ACTIVITIES AS BLOCKING DOORWAYS, PATHWAYS OR STAIRS WITH EQUIPMENT AND MATERIALS, DISMANTLING STAIRS AND **OBSTRUCTING STREET HATCHWAYS.**

15. NOT USED

AM 2

- 16. ALL NEW POWER WIRES SHALL BE WITH RHW-2 INSULATION, LOW SMOKE, ZERO HALOGEN. ALL NEW CONDUITS - GRS TYPE. ALL MATERIALS AND INSTALLATION SHALL COMPLY WITH NFPA-130.
- 17. FOR AC POWER ONE LINE DIAGRAMS PLEASE REFER TO THE **FOLLOWING DRAWINGS:** MM-A-E26 - MEDICAL CENTER

18. TEMPORARY LIGHTING

- A. PROVIDE A TEMPORARY LIGHTING SYSTEM IN PUBLIC AREAS AFFECTED BY THE SCOPE OF WORK INCLUDING BUT NOT LIMITED TO PLATFORMS AND ACCESS PASSAGEWAYS. THE LIGHTING SYSTEM TO BE PROVIDED SHALL INCLUDE LIGHTING FIXTURES, WIRING, RACEWAY, AND SUPPORTS; AND SHALL COMPLY WITH WMATA DESIGN CRITERIA INCLUDING THE FOLLOWING:
- B. ILLUMINATION LEVELS SHALL BE 10FC (FOOT-CANDLES) AVERAGE AND 3FC MINIMUM.
- C. LIGHT SOURCE TYPE AND VOLTAGE SHALL BE IN ACCORDANCE WITH WMATA DESIGN CRITERIA.
- D. A MINIMUM OF 20% OF FIXTURES SHALL BE DESIGNATED AS EMERGENCY FIXTURES AND SHALL BE SUPPLIED FROM AN EMERGENCY SOURCE. EMERGENCY ILLUMINATION LEVELS SHALL COMPLY WITH WMATA DESIGN CRITERIA, INCLUDING THE REQUIREMENT OF 2 FC IN PLATFORMS AND ACCESS PASSAGEWAYS AND 2.5 FC IN EMERGENCY EGRESS PATHS
- E. COORDINATE WITH THE WMATA AR FOR USE OF EXISTING NORMAL AND EMERGENCY POWER SOURCE FOR NORMAL AND EMERGENCY TEMPORARY LIGHTING.
- F. PROVIDE A TEMPORARY LIGHTING SUBMITTAL SHOWING THE FOLLOWING:
 - PHOTOMETRIC PLANS TO DEMONSTRATE THAT THE PROPOSED LIGHTING PLAN WILL PROVIDE THE REQUIRED ILLUMINATION LEVELS.
 - 2. PLANS SHOWING PROPOSED LOCATIONS OF LIGHT FIXTURES MOUNTING HEIGHTS, MOUNTING DETAILS, POWER SOURCE(S) ROUTING AND SUPPORT MEANS OF ALL TEMPORARY SUPPLY WIRING. INCLUDE LOCATION OF PROPOSED POWER SOURCES AND ANY ANCILLARY EQUIPMENT.
 - CATALOG CUTS OF PROPOSED TEMPORARY LIGHTING FIXTURE TYPES, WATTAGES, VOLTAGES AND LUMEN OUTPUT, AND ALL WIRING, RACEWAY, AND SUPPORT MEANS.
 - 4. IF EXISTING PANELS ARE TO BE USED AS THE POWER SOURCE. SHOW ROUTING FROM POWER SOURCE. SHOW NUMBER OF CIRCUITS REQUIRED AND TOTAL LOAD IN KVA. VERIFY EXISTING PANEL HAS SUFFICIENT SPARE CAPACITY TO ACCOMMODATE LIGHTING LOAD BEING ADDED.
- 19. ALL REMOVED AND REPLACED EQUIPMENT, FIXTURES CABLES, WIRING, CONDUIT, AND JUNCTION BOXES SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF IN A LEGAL MANNER.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 43224, EXPIRATION DATE 04-14-2015.

APPROVED .

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

A Gannett Fleming/Parsons
JOINT VENTURE

GROSVENOR - PART 1 SCOPE OF ELECTRICAL WORK AND GENERAL NOTES

RED LINE REHAB.-FRIENDSHIP HEIGHTS TO

ABBREVIATION, LIGHTING FIXTURE SCHEDULE

DRAWING NO. A10-E-001

FINAL

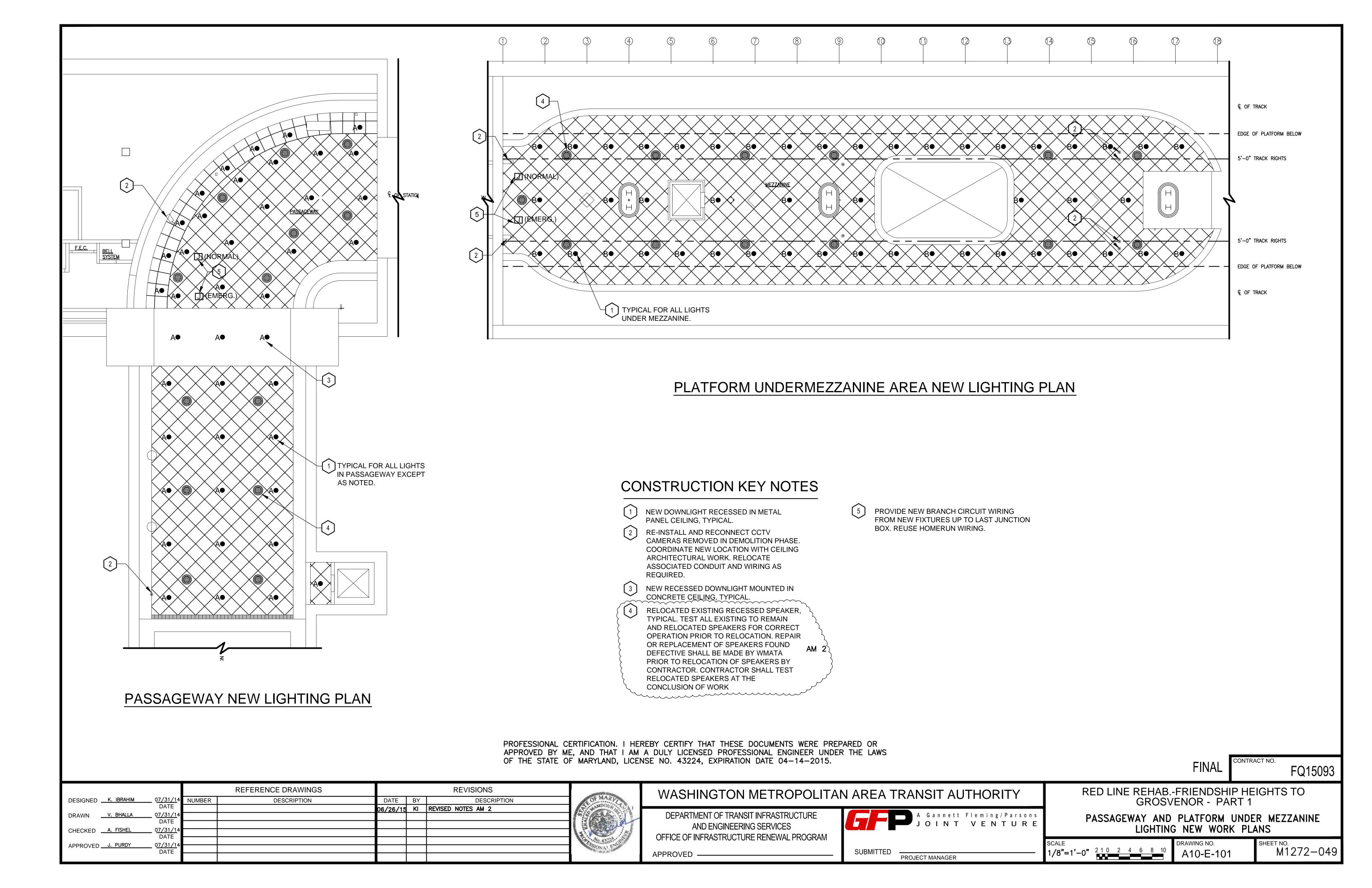
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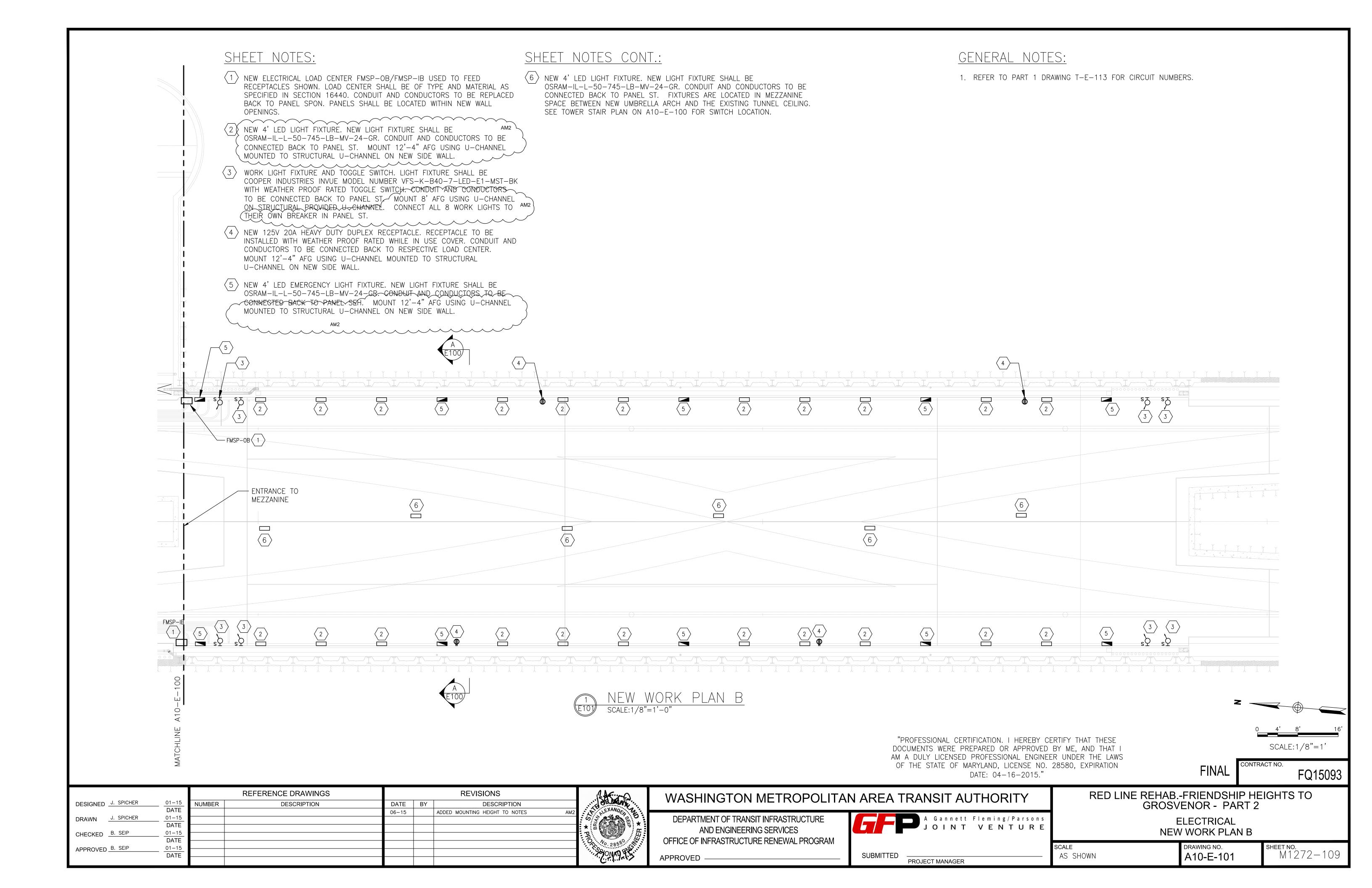
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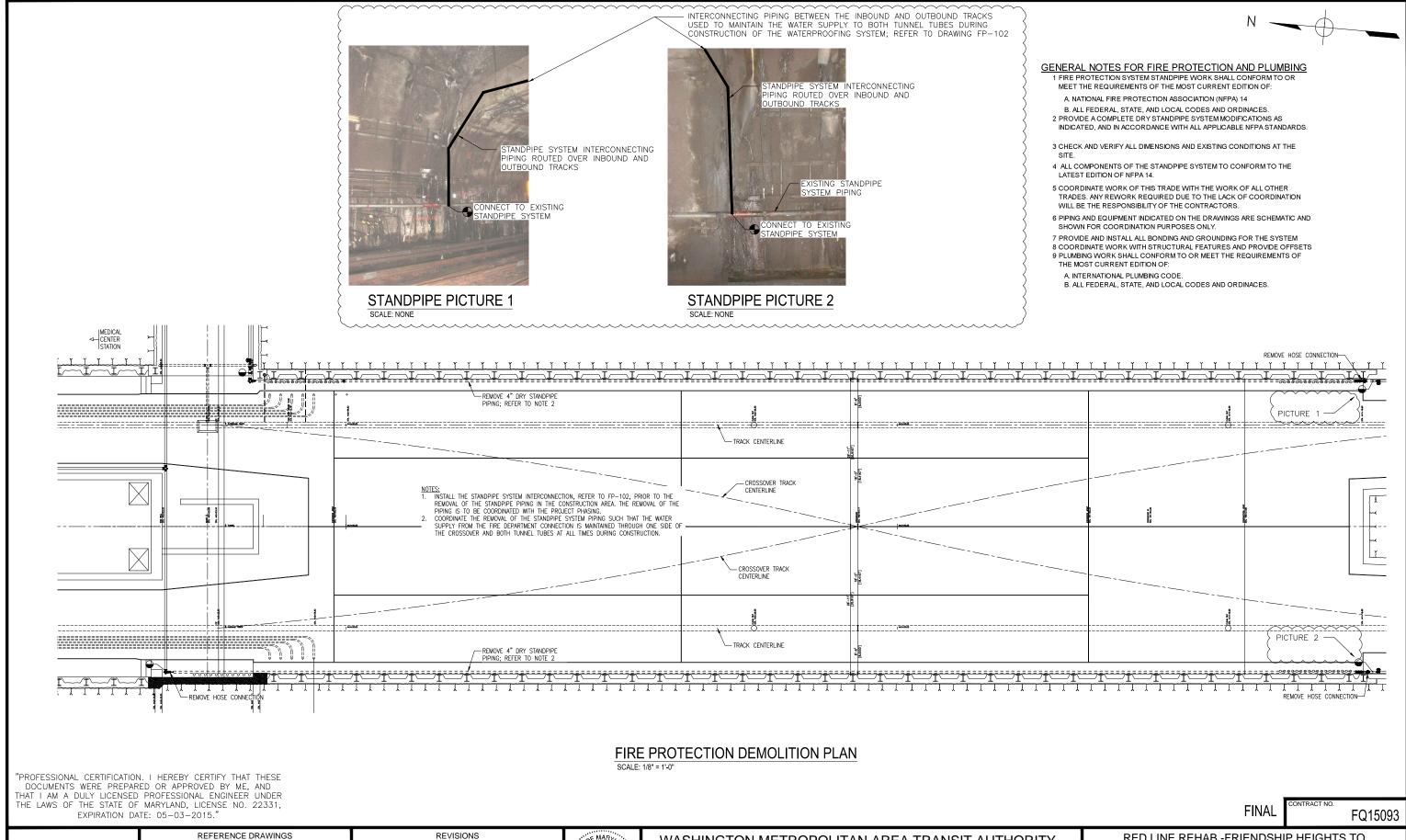
REFERENCE DRAWINGS REVISIONS DESIGNED K. IBRAHIM <u>07/31/1</u> DESCRIPTION DATE BY DESCRIPTION NUMBER 06/15 | KI | REVISED NOTES AM 2 ___V._BHALLA 0<u>7/31/1</u> CHECKED A. FISHEL 0<u>7/31/1</u> 0<u>7/31/1</u> DATE APPROVED J. PURDY

PROJECT MANAGER

SCALE NOT TO SCALE







REFERENCE DRAWINGS DESIGNED T. BRANSOM DESCRIPTION DATE DRAWN 8 No 2110 ESS/ONAL DATE CHECKED P. HUFFMAN 01-15 DATE APPROVED P. HUFFMAN DATE 2/18/15



APPROVED

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

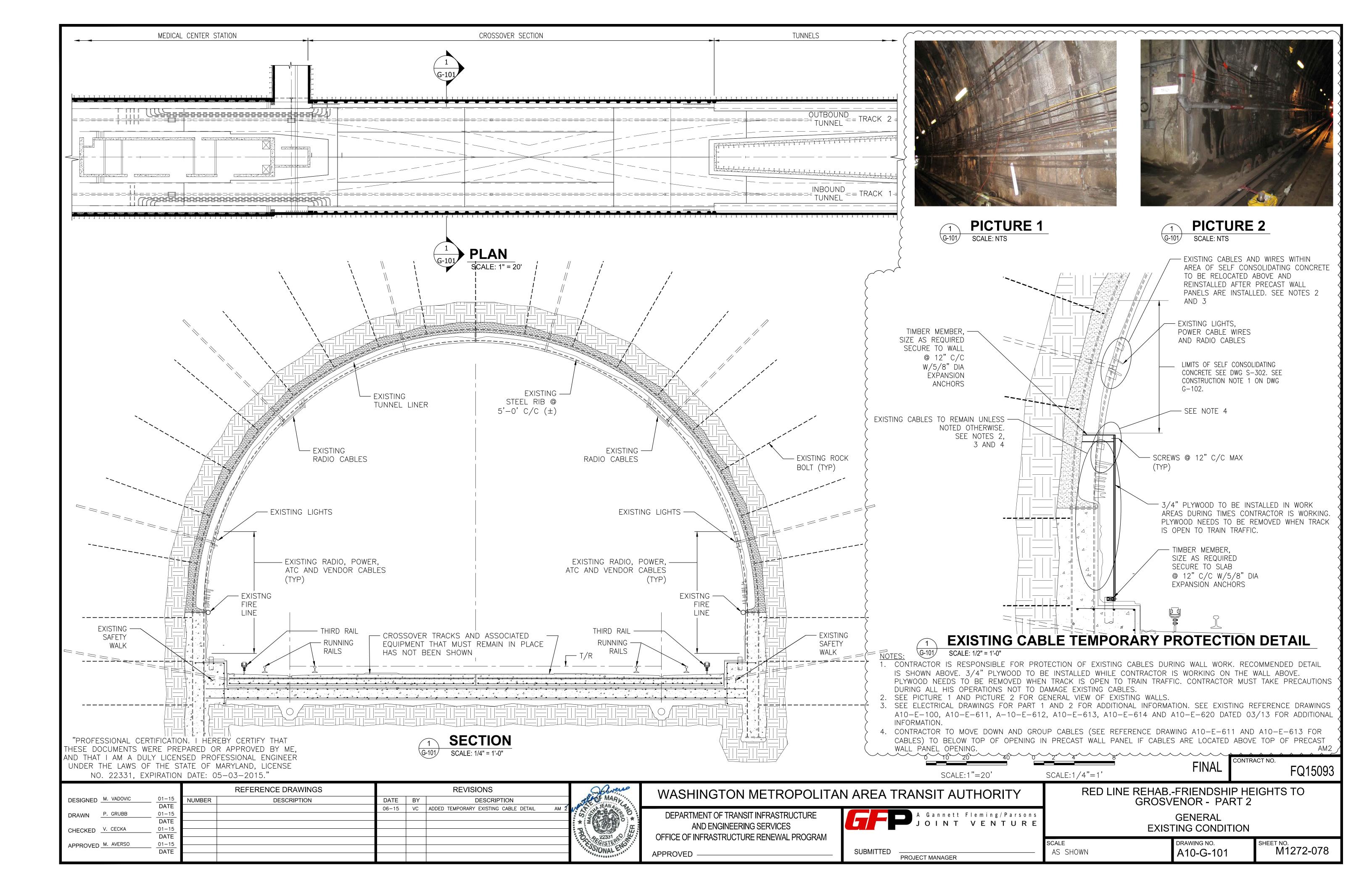
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

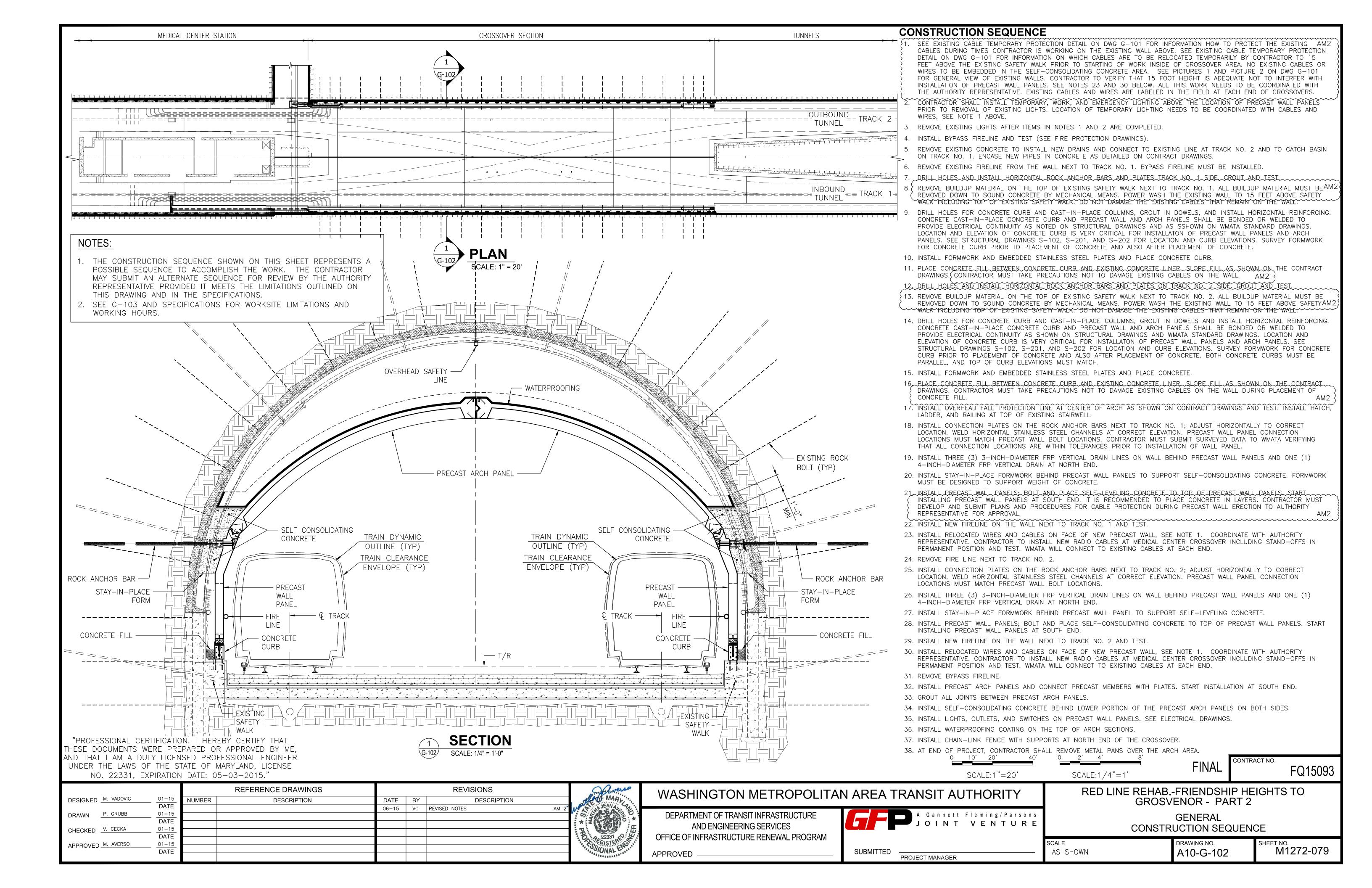


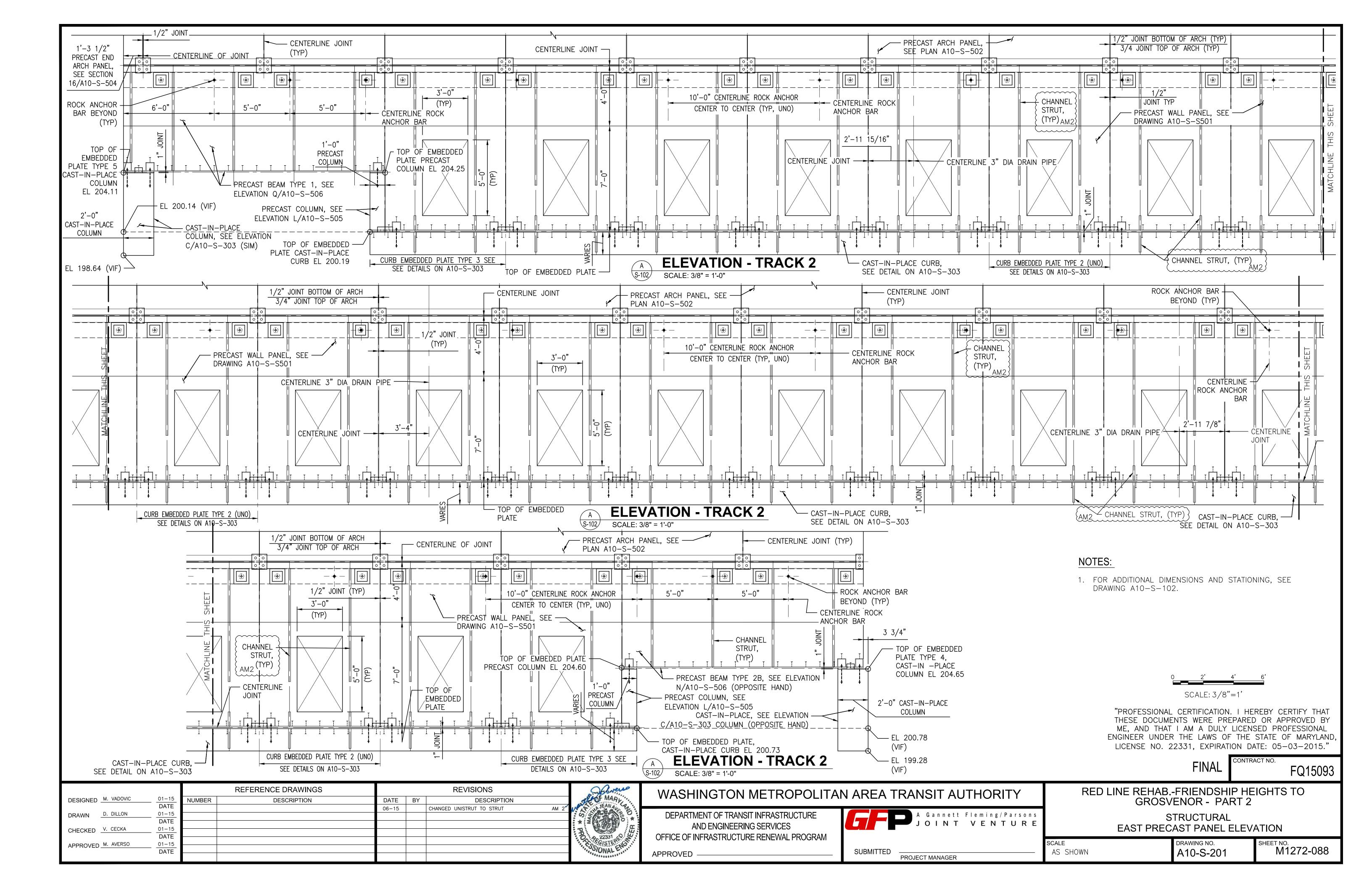
PRO JECT MANAGER

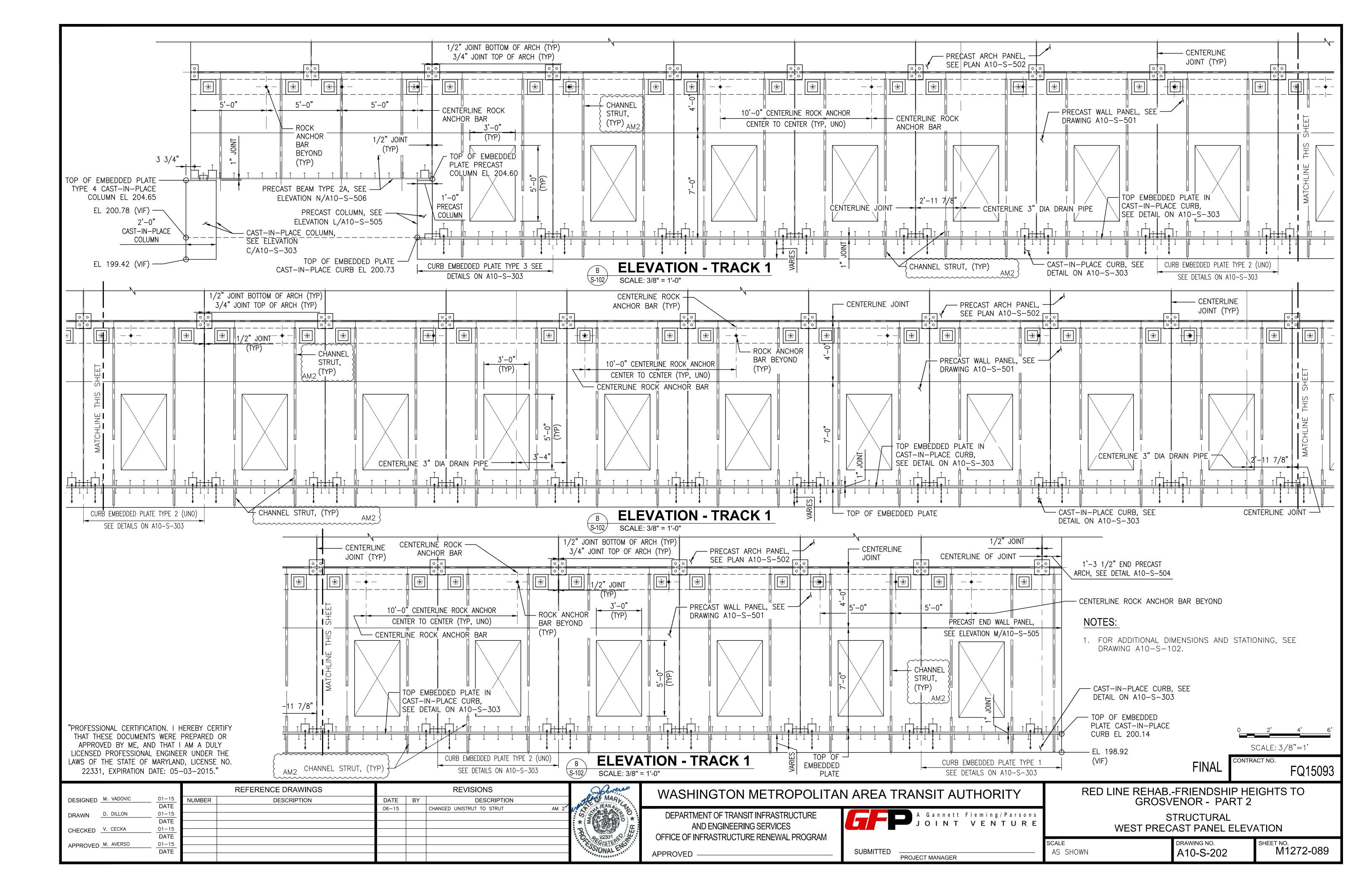
RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR - PART 2 FIRE PROTECTION **DEMOLITION PLAN**

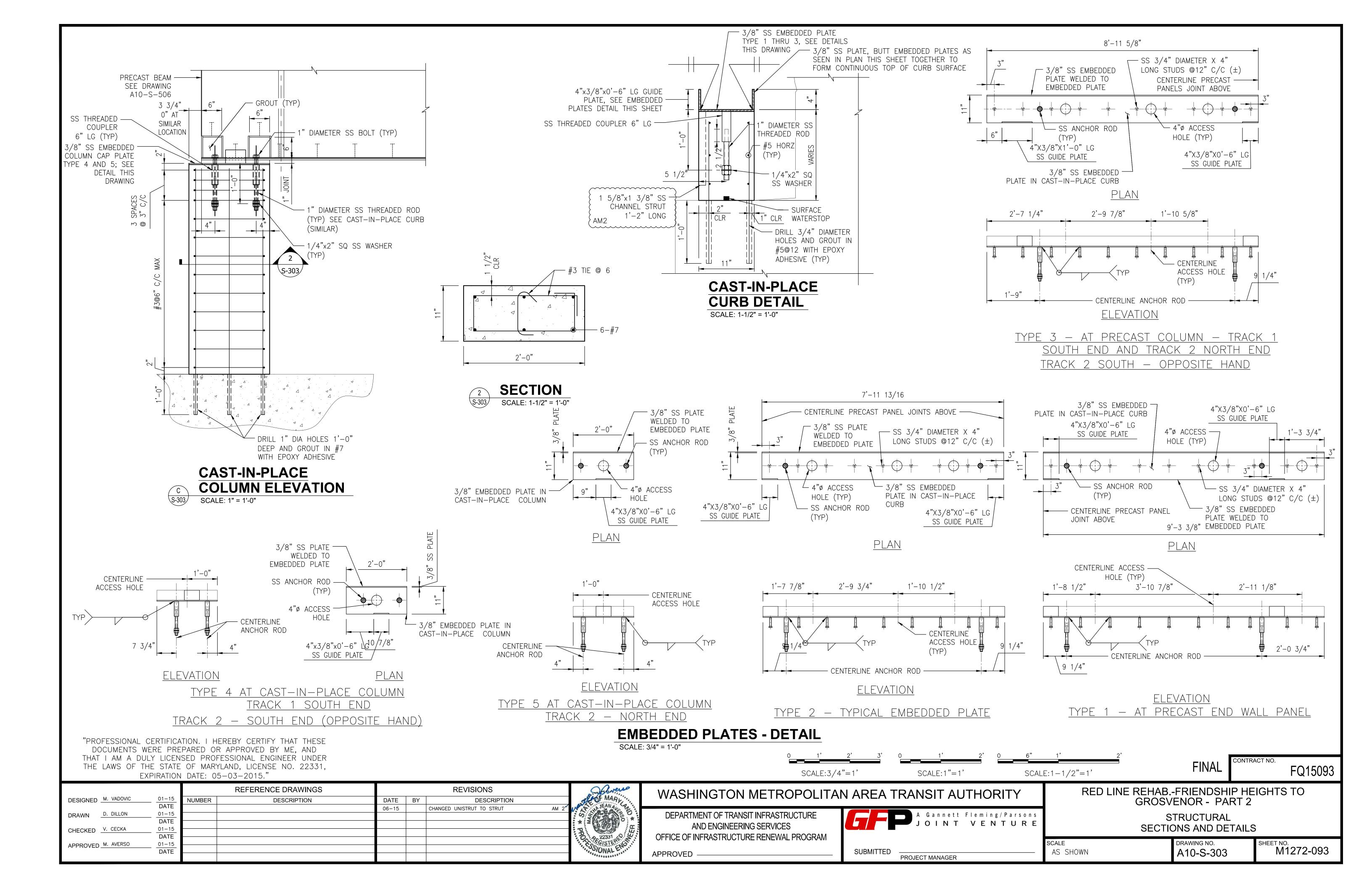
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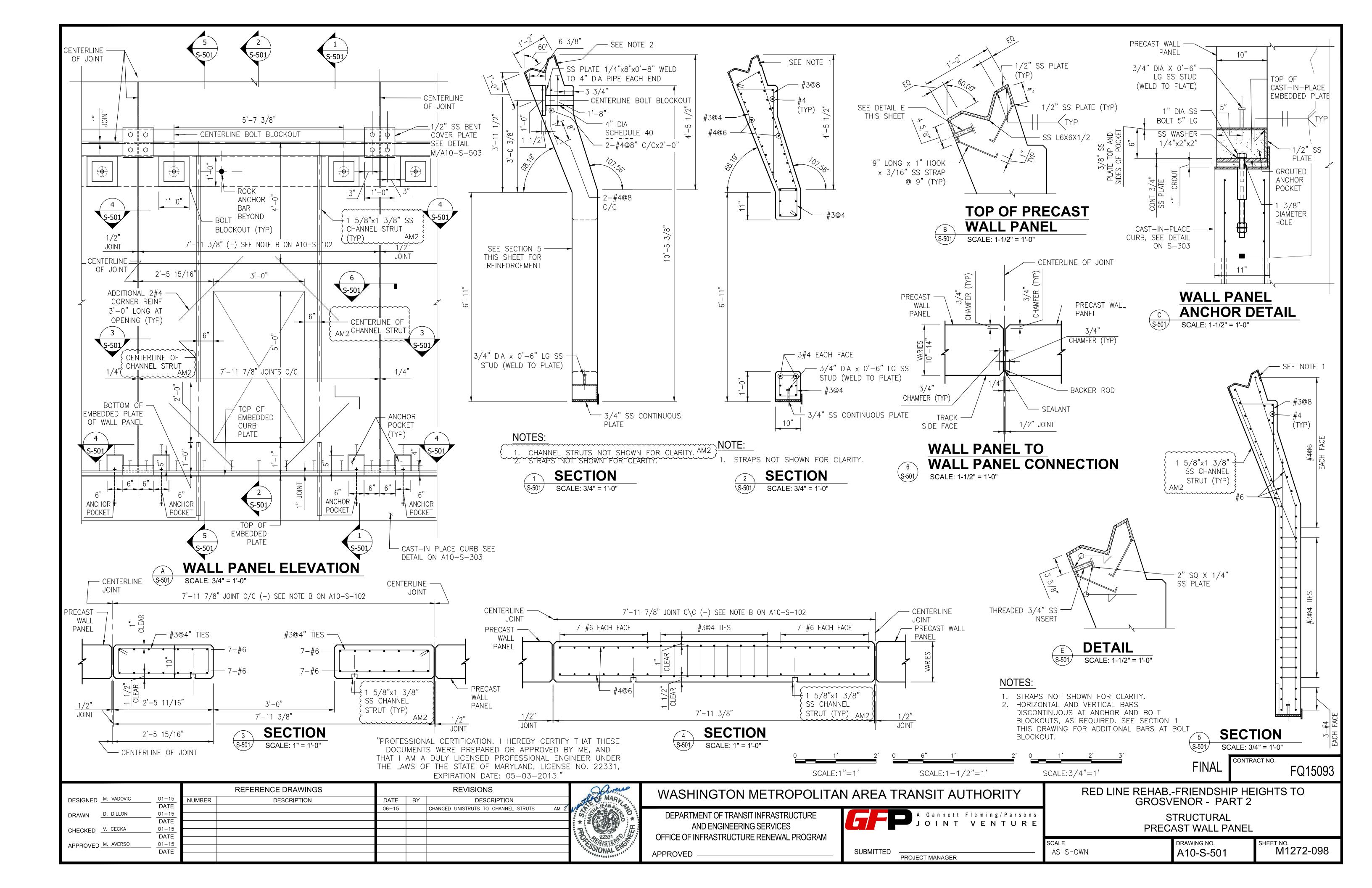


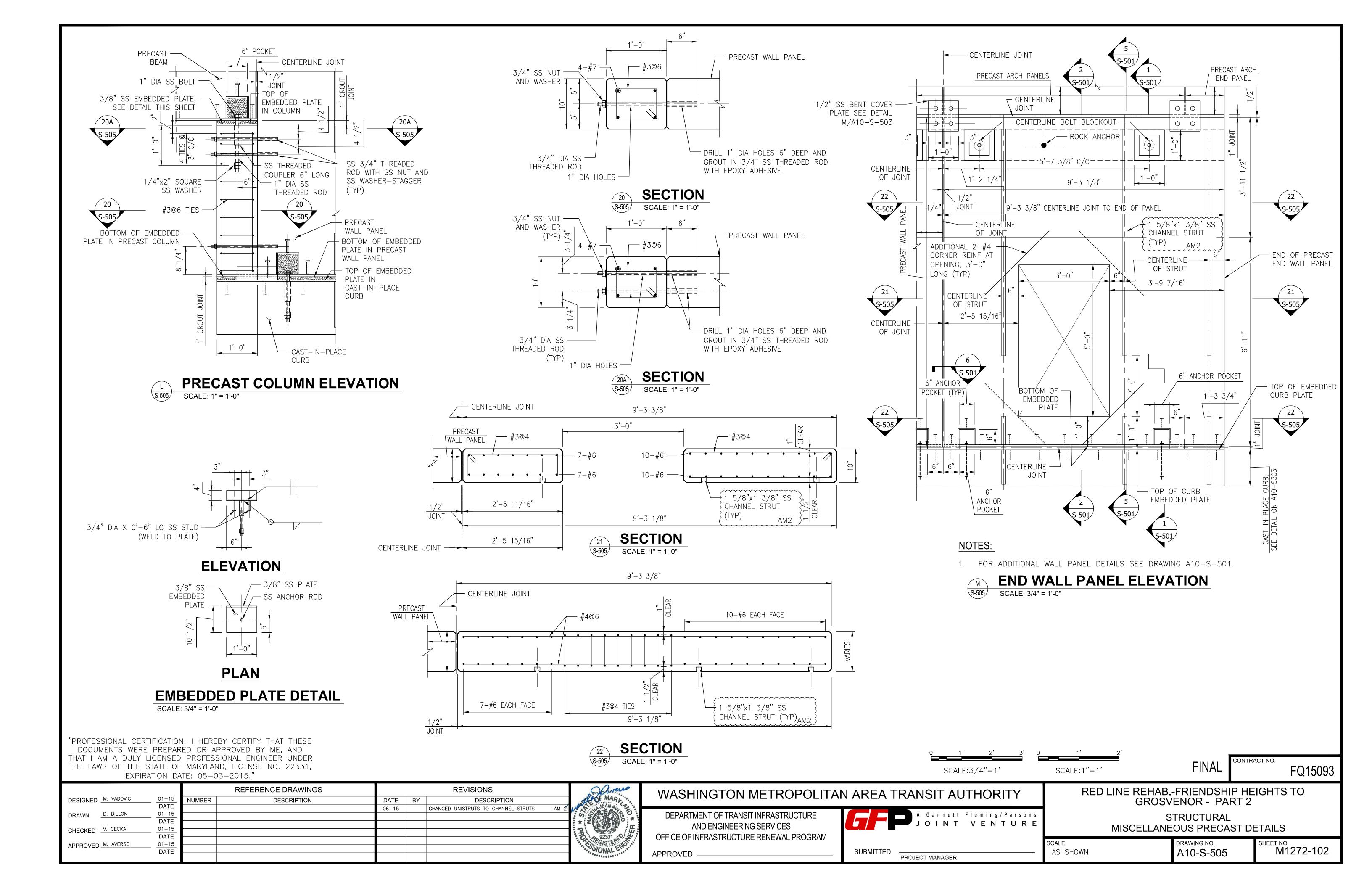


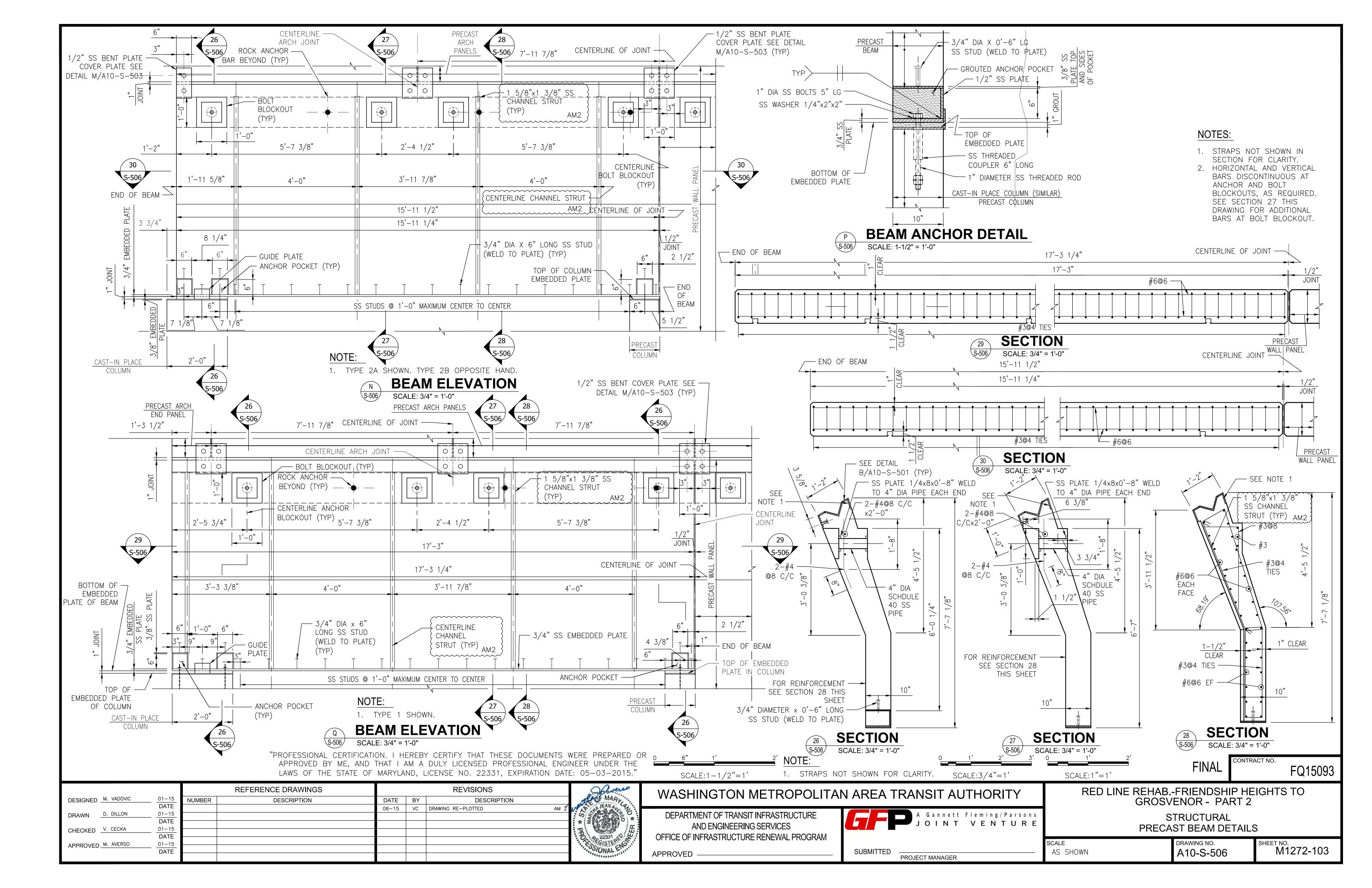


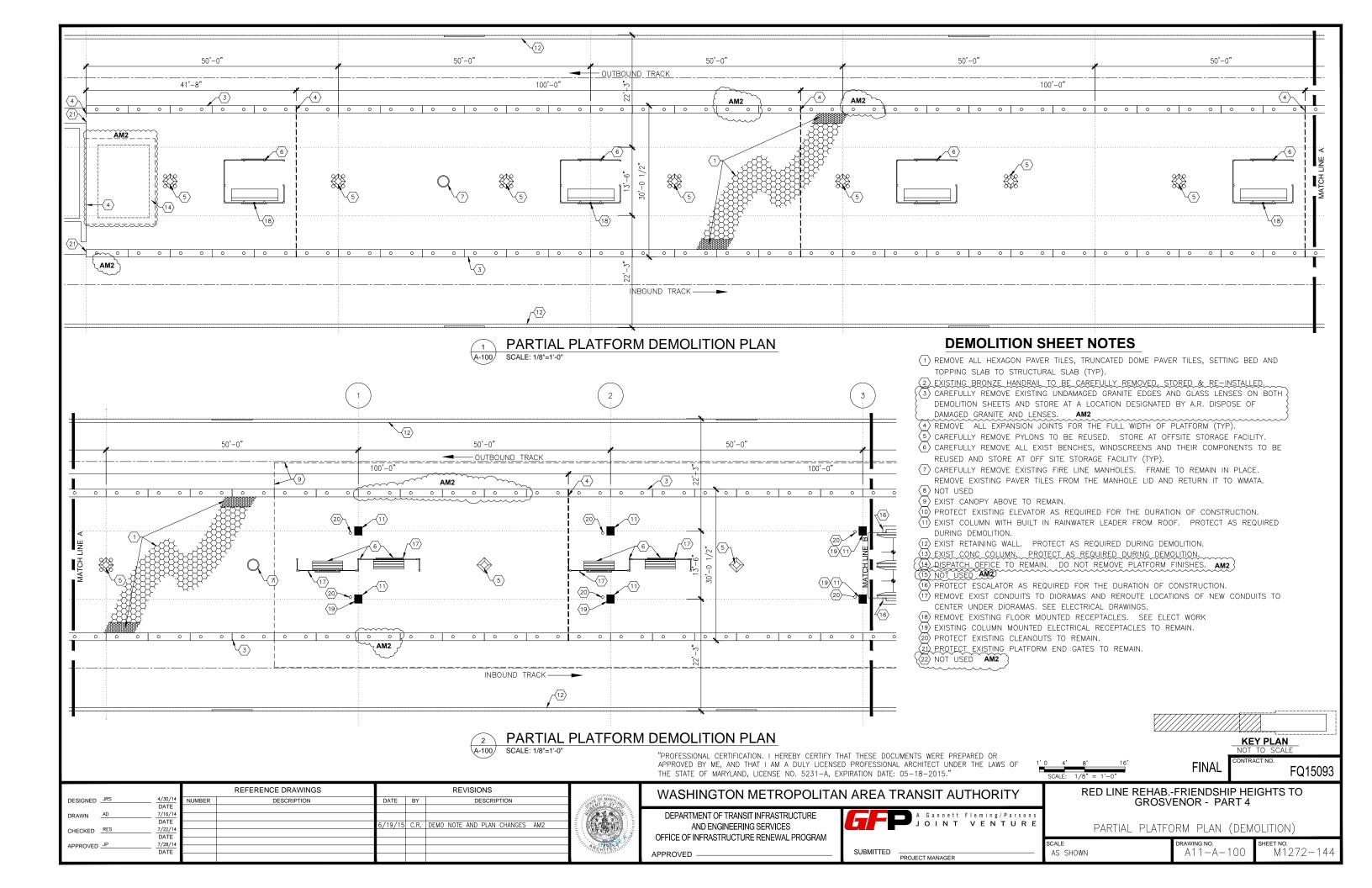


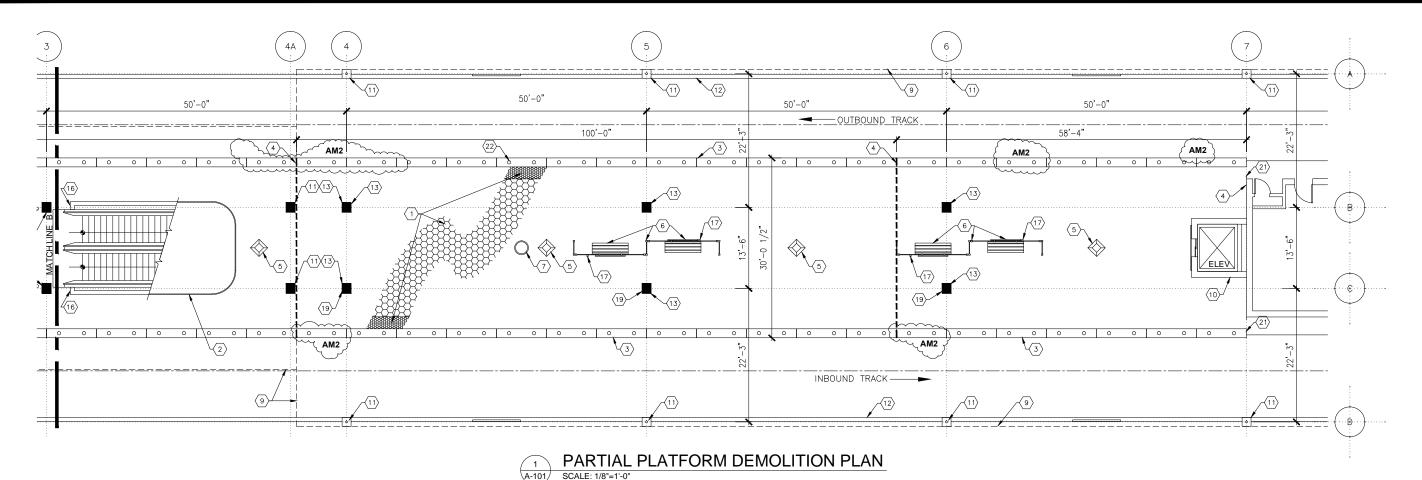












GENERAL DEMOLITION NOTES

- 1. VERIFY EXISTING FIELD CONDITIONS.
- 2. PRIOR TO DEMOLITION, VERIFY MATERIALS AND EQUIPMENT TO BE SALVAGED. STORE WHERE DIRECTED BY A.R.
- 3. VERIFY AND MARK ALL UNDER SLAB UTILITIES PRIOR TO THE START OF WORK. CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL UTILITIES IN PLENUM AREA BELOW PLATFORM AND VERIFY THAT ALL WORK IS COORDINATED.
- 4. REMOVE ALL RUBBISH AND DEMOLITION DEBRIS FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER.
- 5. COORDINATE GENERAL CONSTRUCTION DEMOLITION WITH THE STRUCTURAL AND ELECTRICAL DEMOLITION WORK.
- 6. REPAIR ALL EXISTING STRUCTURES, UTILITIES, AND EQUIPMENT, SCHEDULED TO REMAIN, WHICH ARE DAMAGED DURING DEMOLITION OPERATIONS. ALL WORK SCHEDULED TO BE DEMOLISHED, SHALL BE REMOVED COMPLETELY INCLUDING ALL FASTENERS, ATTACHMENTS, ACCESSORIES, AND ANY RELATED WORK.
- 7. DEMOLITION INCLUDES ALL ITEMS WHETHER OR NOT SHOWN ON THE DRAWINGS, THAT ARE REQUIRED TO BE REMOVED IN ORDER TO INSTALL THE NEW WORK SHOWN ON DRAWINGS A-102 A-507 AND OTHER PORTIONS OF THE CONTRACT
- 8. ALL SURFACES TO REMAIN SHALL BE REFINISHED TO REPAIR ALL HOLES, SCRATCHES, DENTS, MARS, PITTING, ADHESIVE, BAD JOINTS, DEFECTIVE CMU, ETC, AS CAUSED BY DEMOLITION AND CONSTRUCTION ACTIVITY. TO BE ACCEPTABLE IN EVERY WAY TO RECEIVE NEW FINISHES.

DEMOLITION SHEET NOTES

- (1) REMOVE ALL HEXAGON PAVER TILES, TRUNCATED DOME PAVER TILES, SETTING BED AND TOPPING SLAB TO STRUCTURAL SLAB (TYP).
- EXISTING BRONZE HANDRAIL TO BE CAREFULLY REMOVED, STORED & RE-INSTALLED.
- (3) CAREFULLY REMOVE EXISTING UNDAMAGED GRANITE EDGES AND GLASS LENSES ON BOTH DEMOLITION SHEETS AND STORE AT A LOCATION DESIGNATED BY A.R. DISPOSE OF DAMAGED GRANITE AND LENSES. AM2
- (4) REMOVE ALL EXPANSION JOINTS FOR THE FULL WIDTH OF PLATFORM (TYP).
- $\langle 5
 angle$ carefully remove pylons to be reused. Store at offsite storage facility.
- $\langle \overline{\mathfrak{b}} \rangle$ carefully remove all exist benches, windscreens and their components to be REUSED AND STORE AT OFF SITE STORAGE FACILITY (TYP).
- $\overline{\langle 7 \rangle}$ CAREFULLY REMOVE EXISTING FIRE LINE MANHOLES. FRAME TO REMAIN IN PLACE. REMOVE EXISTING PAVER TILES FROM THE MANHOLE LID AND RETURN IT TO WMATA. 8 NOT USED

- PROTECT EXISTING ELEVATOR AS REQUIRED FOR THE DURATION OF CONSTRUCTION.

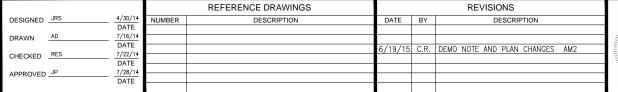
 (1) EXIST COLUMN WITH RIBIT IN PAINWATER 151255 EXIST COLUMN WITH BUILT IN RAINWATER LEADER FROM ROOF. PROTECT AS REQUIRED DURING DEMOLITION.
- (12) EXIST RETAINING WALL. PROTECT AS REQUIRED DURING DEMOLITION.
- (13) EXIST CONC COLUMN. PROTECT AS REQUIRED DURING DEMOLITION.
- OFFICE TO REMAIN. DO NOT REMOVE PLATFORM FINISHES. AM2
- (16) PROTECT ESCALATOR AS REQUIRED FOR THE DURATION OF CONSTRUCTION. $\overline{\langle 17 \rangle}$ REMOVE EXIST CONDUITS TO DIORAMAS AND REROUTE LOCATIONS OF NEW CONDUITS TO CENTER UNDER DIORAMAS. SEE ELECTRICAL DRAWINGS.
- (18) REMOVE EXISTING FLOOR MOUNTED RECEPTACLES. SEE ELECT WORK

APPROVED

(19) EXISTING COLUMN MOUNTED ELECTRICAL RECEPTACLES TO REMAIN.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 5231-A, EXPIRATION DATE: 05-18-2015."

20) PROTECT EXISTING CLEANOUTS TO REMAIN. 21) PROTECT EXISTING PLATFORM END GATES TO REMAIN. (22) NOT UŠEĎ AM2





WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM



NOT FINAL FQ15093 RED LINE REHAB.-FRIENDSHIP HEIGHTS TO **GROSVENOR - PART 4**

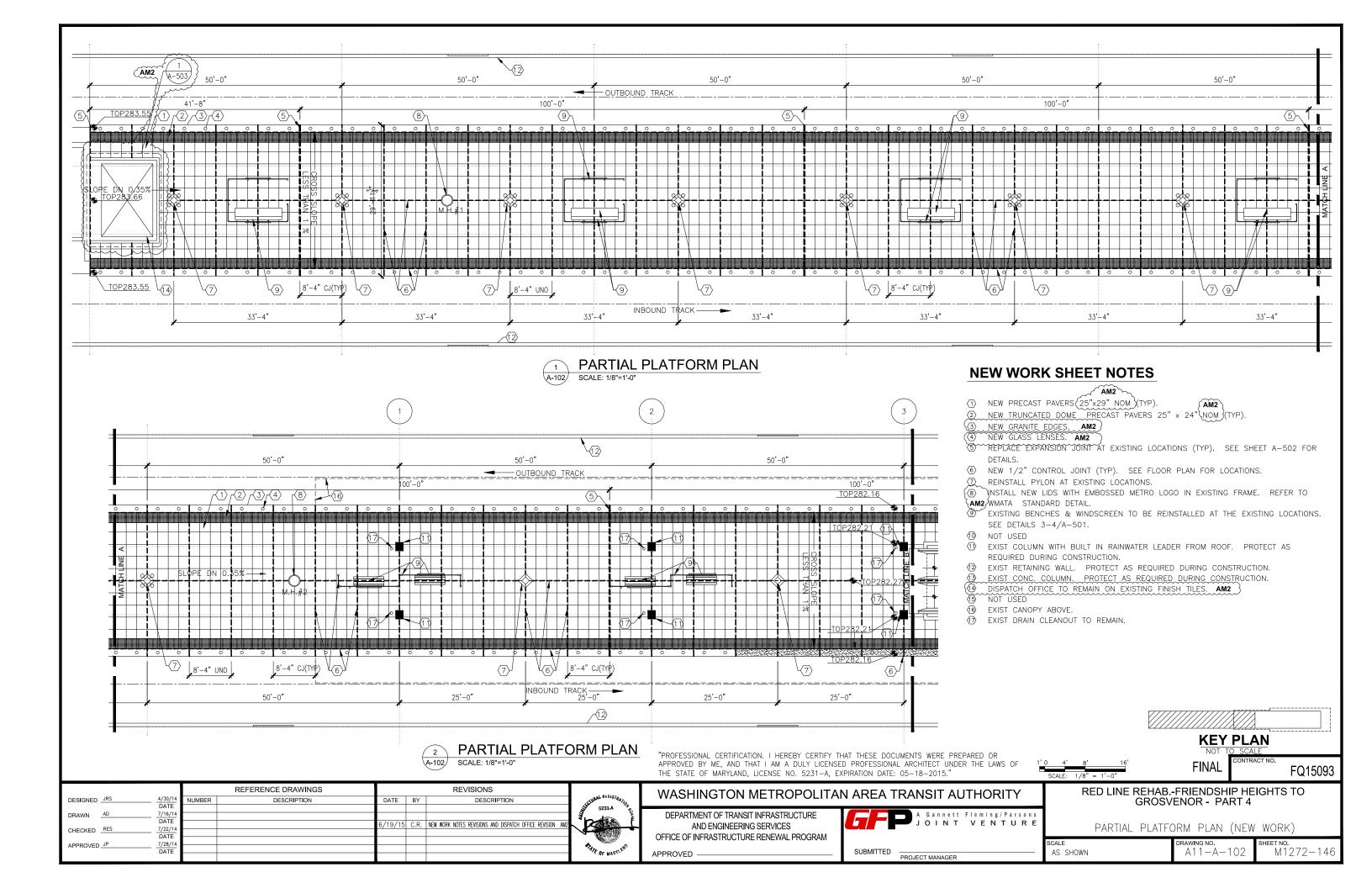
KEY PLAN

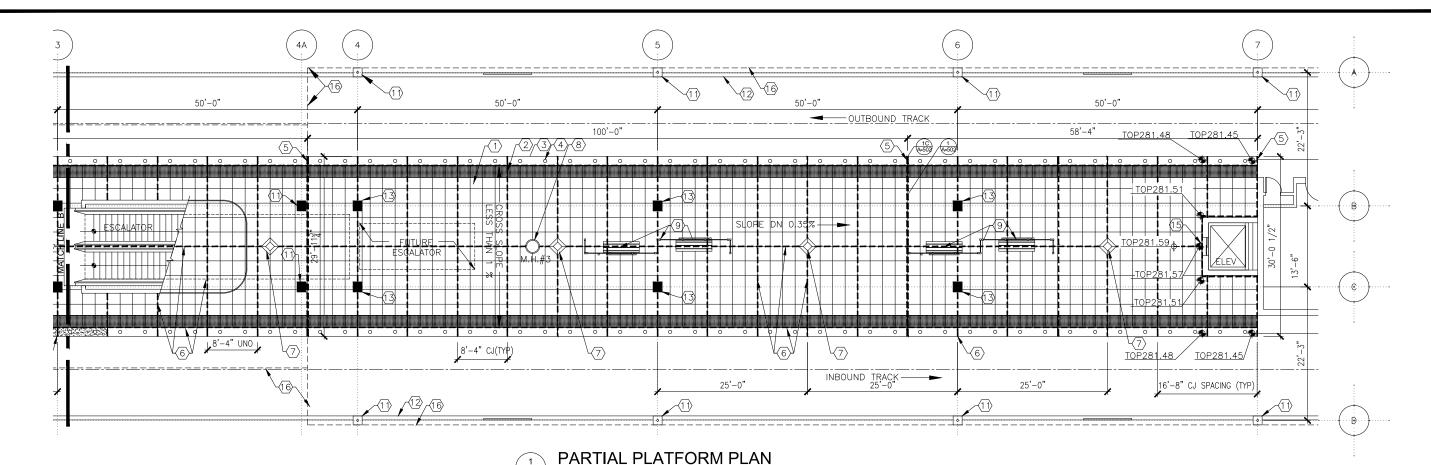
PARTIAL PLATFORM PLAN (DEMOLITION)

M1272-145

PROJECT MANAGER

AS SHOWN A11-A-10





GENERAL NOTES

- 1. VERIFY ALL DIMENSIONS IN THE FIELD.
- 2. VERIFY ALL FIELD CONDITIONS.
- 3. ALL DIMENSIONS ARE NOMINAL UNLESS NOTED OTHERWISE.
- 4. ALL WORK WILL BE COMPLETED IN ACCORDANCE WITH THE LATEST VERSIONS OF I.B.C. AND LIFE SAFETY CODES. ALL WORK IS DESIGNED AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH WMATA DESIGN CRITERIA, VERSION 9.
- 5. DO NOT SCALE DRAWINGS FOR PURPOSES OF CONSTRUCTION.
- 6. ANY DEVIATION FROM, OR IN FIELD ALTERATION TO THESE DRAWINGS, AND SPECIFICATIONS IS STRICTLY PROHIBITED WITHOUT PRIOR APPROVAL OF A.R. ANY SUCH ALTERATIONS SHALL BE CORRECTED AT ONCE, WITH NO EXPENSE TO THE OWNER.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES REGARDLESS OF DISCREPANCIES IN THE CONTRACT DOCUMENTS. NO ADDITIONAL COSTS WILL BE PAID BY THE OWNER TO RECTIFY WORK TO BE RELOCATED DUE TO LACK OF JOBSITE COORDINATION
- 8. DEMOLITION, CUTTING, AND PATCHING OF ANY MATERIALS OR FIXTURES REQUIRED TO CONSTRUCT THE PROJECT IS HEREIN MADE A PART OF THESE DOCUMENTS.
- 9. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AS REQUIRED.
- 10. THE IMAGES ON THE CONSTRUCTION DOCUMENT FLOOR PLANS REFLECT THE INFORMATION FROM THE ORIGINAL CONSTRUCTION DOCUMENTS FOR THE PROJECT, IT IS NOT AN INDICATION OF NEW WORK, IT IS SHOWN IN GRAY LINE COLOR. THE NEW WORK AND REQUIRED DEMOLITION OR REMOVALS ARE SHOWN IN BLACK LINE COLOR. IF THE DIFFERENCE IS NOT OBVIOUS, REPORT TO THE A.R. IMMEDIATELY.
- 11. ALL WORK INDICATED OR SHOWN GRAPHICALLY AS "EXISTING TO REMAIN" WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND WORK AROUND WITHOUT DISTURBING. IF DAMAGED, THE CONTRACTOR WILL REPLACE AT NO ADDITIONAL COST TO THE OWNER.
- 12. FIREPROOF ALL NEW STRUCTURAL STEEL, INCLUDING, BUT NOT LIMITED TO COLUMNS, BEAMS, METAL DECK, AND MISCELLANEOUS METALS - SEE SPECIFICATION SECTION 07.81.00.
- 13. CUTTING AND REMOVING OF GRANITE TILE EDGES WILL BE UNDERTAKEN CAREFULLY.

NEW WORK SHEET NOTES

- 1 NEW PRECAST PAVERS (25"x29" NOM (TYP).
- NEW TRUNCATED DOME PRECAST PAVERS 25" x 24" (NOM)(TYP).
- NEW GRANITE EDGES. AM2 NEW GLASS LENSES. AM2
- REPLACE EXPANSION JOINT AT EXISTING LOCATIONS (TYP). SEE SHEET A-502 FOR
- NEW 1/2" CONTROL JOINT (TYP). SEE FLOOR PLAN FOR LOCATIONS.
- REINSTALL PYLON AT EXISTING LOCATIONS.
- INSTALL NEW LIDS WITH EMBOSSED METRO LOGO IN EXISTING FRAME. REFER TO AM2/WMATA STANDARD DETAIL.
- EXISTING BENCHES & WINDSCREEN TO BE REINSTALLED AT THE EXISTING LOCATIONS. SEE DETAILS 3-4/A-501.
- NOT USED
- EXIST COLUMN WITH BUILT IN RAINWATER LEADER FROM ROOF. PROTECT AS REQUIRED DURING CONSTRUCTION.
- EXIST RETAINING WALL. PROTECT AS REQUIRED DURING CONSTRUCTION.
- EXIST CONC. COLUMN. PROTECT AS REQUIRED DURING CONSTRUCTION.
- DISPATCH OFFICE TO REMAIN ON EXISTING FINISH TILES. AM2 NOT USED
- (16) EXIST CANOPY ABOVE.
- EXIST DRAIN CLEANOUT TO REMAIN.



M1272 - 147

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 5231-A, EXPIRATION DATE: 05-18-2015."

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

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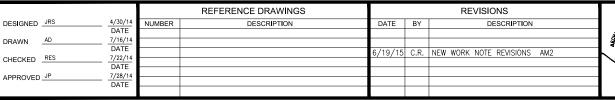


PROJECT MANAGER

RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR - PART 4

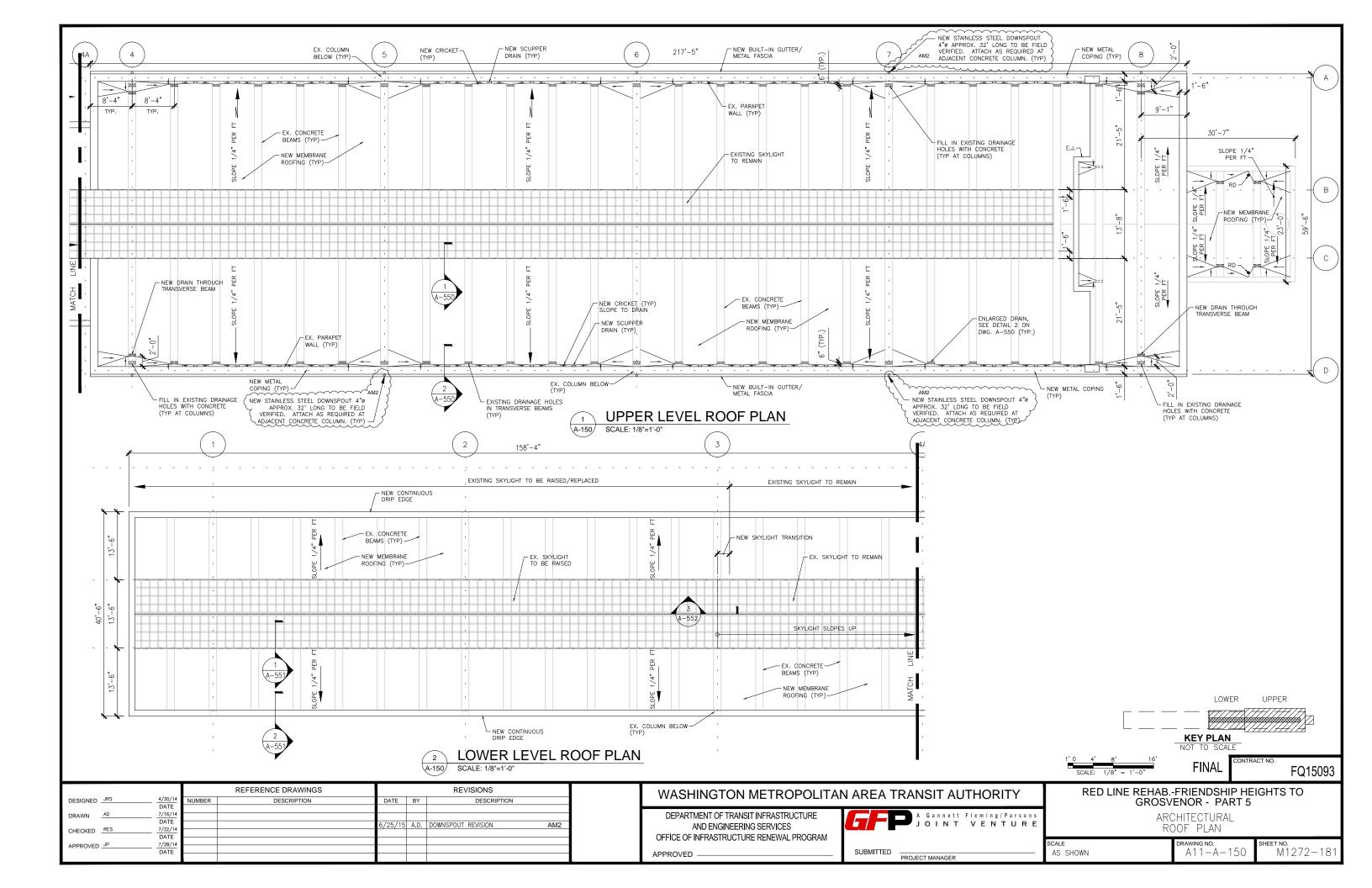
PARTIAL PLATFORM PLAN (NEW WORK)

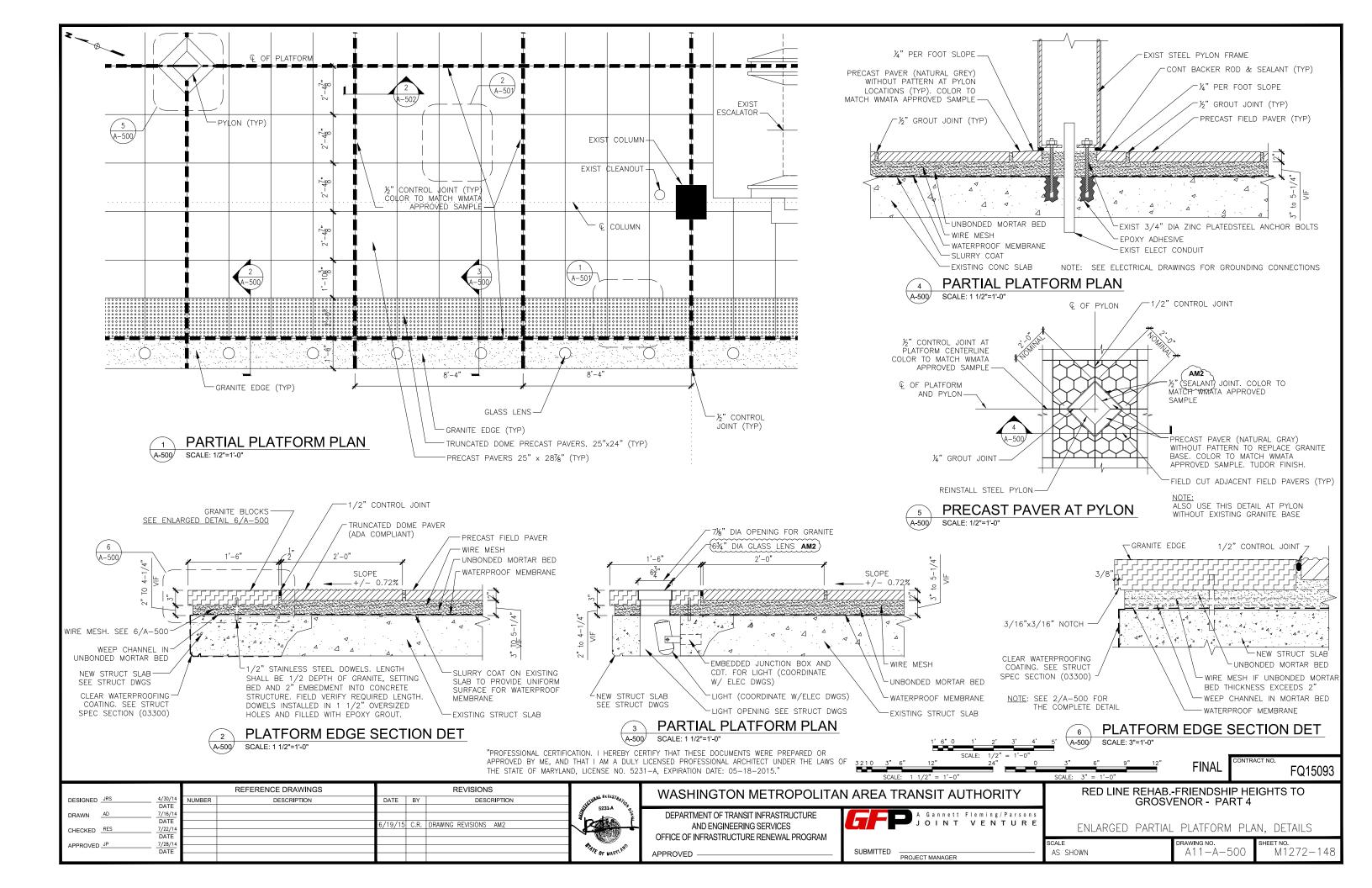
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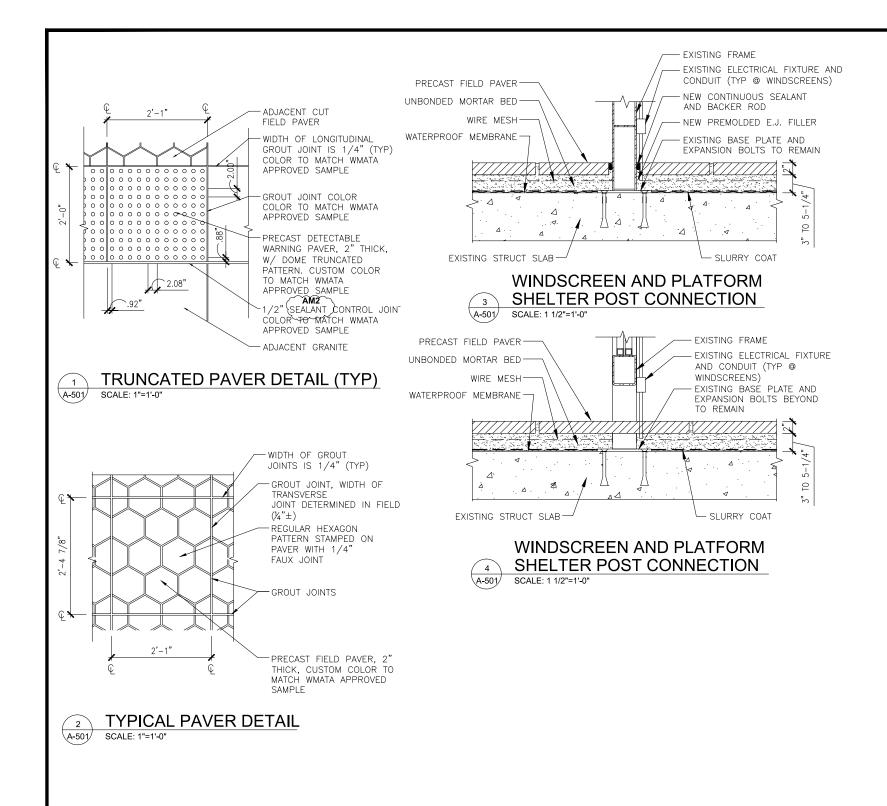


5231-A TATE OF MARYLAN

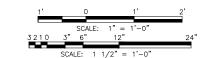
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FINAL

FQ15093

REFERENCE DRAWINGS REVISIONS DESIGNED JRS 4/30/1 DATE DATE BY DESCRIPTION NUMBER 7/16/1-DATE DRAWN /19/15 C.R. SEALANT NOTE REVISION AM2 CHECKED RES 7/22/1-DATE 7/28/1-DATE APPROVED JP



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM



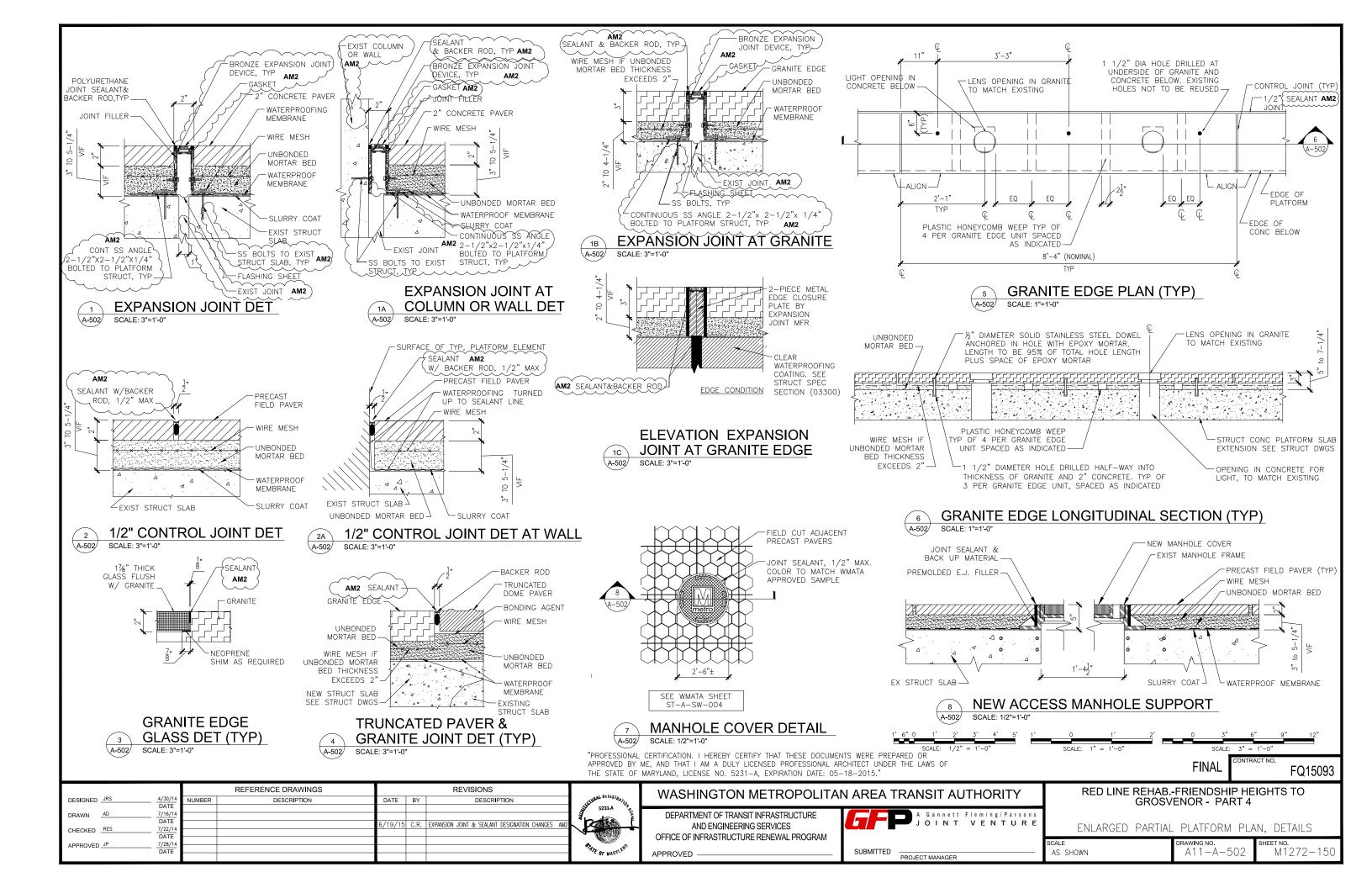
RED LINE REHAB.-FRIENDSHIP HEIGHTS TO **GROSVENOR - PART 4**

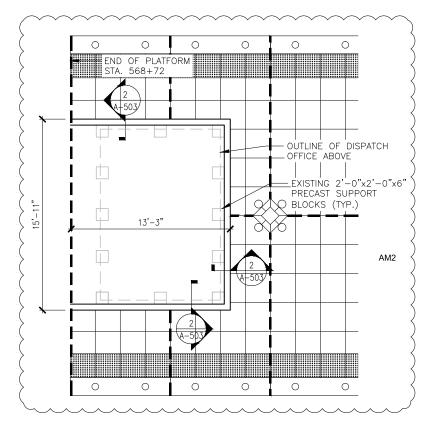
ENLARGED PARTIAL PLATFORM PLAN, DETAILS

SUBMITTED PROJECT MANAGER

A11-A-501 AS SHOWN

M1272-149

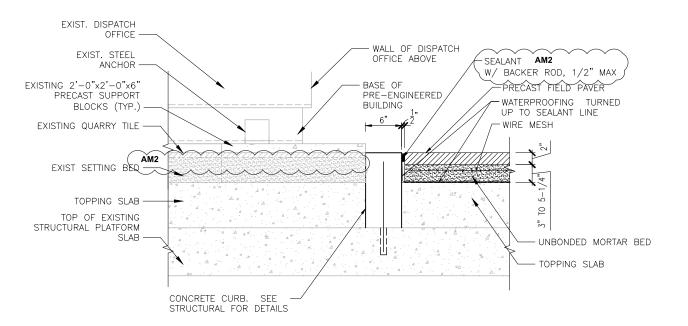




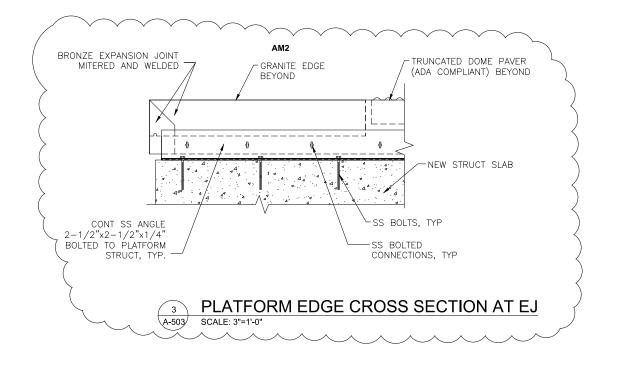


NOTES:

- 1. THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF EXISTING REINFORCING STEEL AND OTHER EMBEDDED ITEMS IN THE PLATFORM PRIOR TO DRILLING HOLES TO INSTALL NEW CURB.
- 2. DISPATCH OFFICE TO REMAIN IN PLACE DURING WORK.
- 3. TOP OF CURB TO MATCH ELEVATION OF TOP OF NEW PAVERS.







FQ15093

M1272 - 151

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 5231-A, EXPIRATION DATE: 05-18-2015."

TATE OF MARYLAN

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DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

A Gannett Fleming/Parsons JOINT VENTURE AS SHOWN

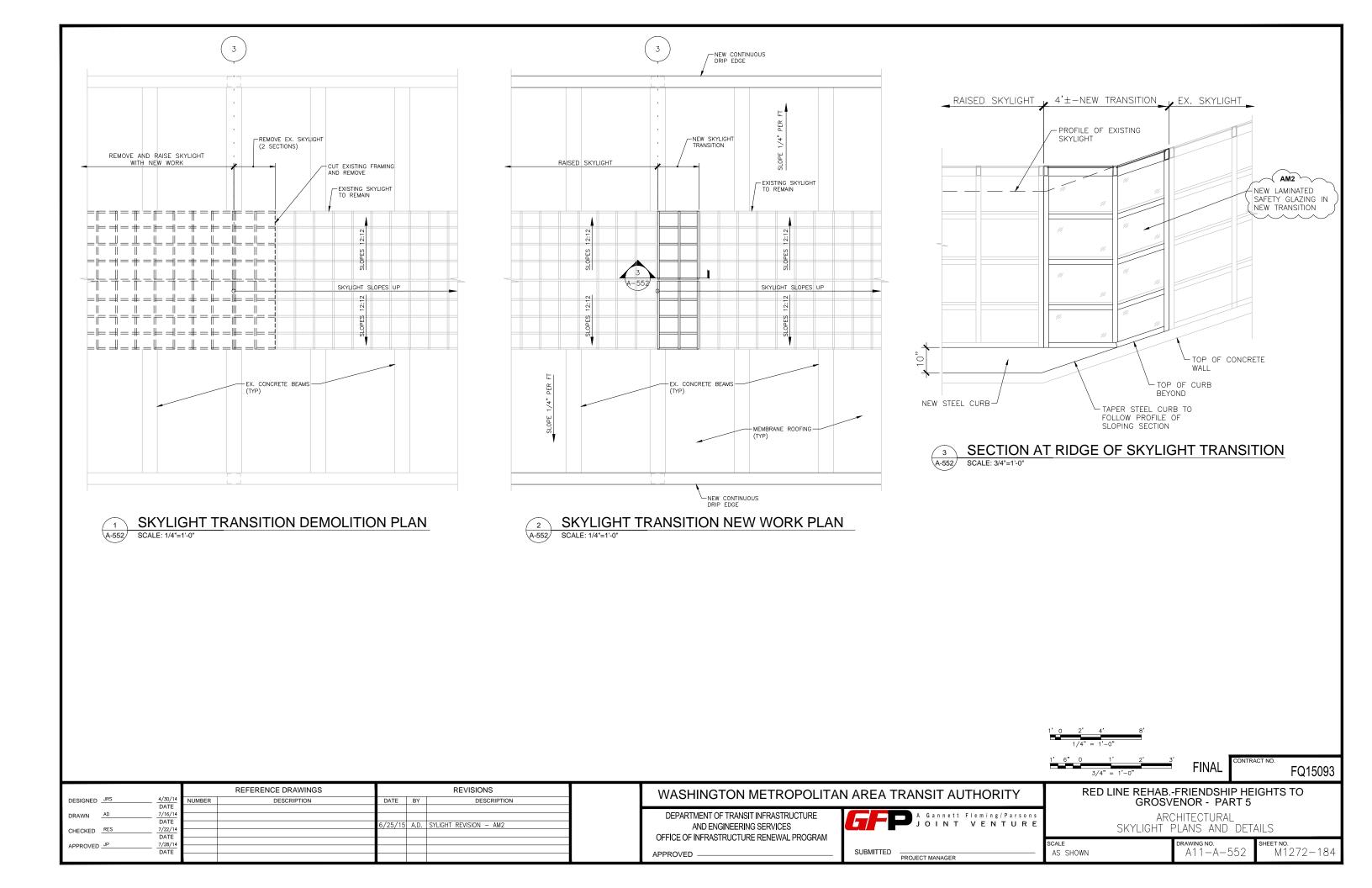
RED LINE REHAB.-FRIENDSHIP HEIGHTS TO **GROSVENOR - PART 4**

FINAL

CONCRETE CURB DETAIL AT DISPATCHER'S OFFICE

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	DATE 7/22/14			6/19/15	C.R.	DRAWING REVISIONS AM2	K.
	DATE 7/28/14						l `
	DATE						•

PROJECT MANAGER



LEGEND

EXISTING TO REMAIN EXPOSED CONDUIT EXISTING TO REMAIN CONCEALED CONDUIT

PLAN KEY NOTES

- 1 DISCONNECT REMOVED PYLONS AND CONNECT THEM BACK AFTER THEY ARE RE-INSTALLED. PROVIDE FUNCTIONAL TESTING OF CONNECTED DEVICES AFTER RECONNECTION. REPAIR OF NON-OPERATING DEVICES WILL BE DONE BY WMATA.
- DISCONNECT REMOVED DIORAMAS AND RECONNECT THEM AFTER THEY ARE RE-INSTALLED. PROVIDE FUNCTIONAL TESTING OF CONNECTED DEVICES AFTER RECONNECTION. REPAIR OF NON-OPERATING DEVICES WILL BE DONE BY WMATA. WHEN RECONNECTING DIORAMAS, RELOCATE CONDUIT STUB-UP TO A POINT DIRECTLY BELOW DIORAMA.
- REMOVE EXISTING FLASHING LIGHTS. REPLACE EXISTING FLASHER/DIMMER CABINETS IN BOTH AC SWITCHGEAR ROOMS INSTALL NEW FLASHING LIGHTS. PROVIDE NEW CONDUIT AND WIRING. ADJACENT LIGHTS ARE ALTERNATELY CONNECTED TO DIFFERENT PHASES. VERIFY CIRCUITS SHOWN WITH FIELD
- DISCONNECT AND REMOVE FLOOR MOUNTED RECEPTACLES. REMOVE EXISTING POWER SUPPLY WIRING AND CONDUIT BACK TO NEAREST JUNCTION BOX. EXISTING CONDUIT EMBEDDED IN CONTRETE MAY BE ABANDONED.
- GROUNDING: RESTORE GROUNDING CONNECTION TO ALL METALLIC EQUIPMENT ON PLATFORM AFTER EQUIPMENT IS RE-INSTALLED. PROVIDE ADDITIONAL NEW GROUNDING CONNECTIONS AS REQUIRED, PROVIDE GROUNDING AND BONDING CONNECTION FOR ALL PLATFORM MANHOLES, COMPLY WITH WMATA STANDARDS AND GROUNDING DETAIL SHOWN IN THESE DOCUMENTS.
- REPLACE EXISTING GLOBES WITH NEW GLOBES, DECRA-LITE 14" ROUND POLY CARBONATE GLOBE PART #DL14SPCC-H-14. REPLACE LAMPS WITH ENERGY SAVER SPIRAL FLUORESCENT SELF-BALLASTED LAMP, 120V. SEE DETAIL ON DRAWING A11-E-202.
- 7 NOT USED
- DISCONNECT COMMUNICATION WIRING TO EMERGENCY COMMUNICATION PYLONS REMOVED DURING FLOOR REPAIRS AND CONNECT BACK AFTER INSTALLATION.
- REMOVE AND REPLACE PORTION OF CONDUIT AND WIRING SERVICING PLATFORM LIGHTS AND RECEPTACLES THAT CROSSES PLATFORM OVERHANG REPAIR AREA.
- 10 NOT USED.
- (1) PROVIDE NEW RECEPTACLES SUPPORTED FROM WIND SHELTERS. REFER TO DETAIL ON DWG. A11-E-500 FOR
- (2) EXISTING RELOCATED FIRE WATER STANDPIPE. REFER TO MECHANICAL DWGS. FOR EXACT LOCATION. RESTORE BONDING JUMPERS ACROSS FLANGES.
- (3) PROVIDE A GREEN INSULATED #6 AWG BONDING WIRE FROM FIRE WATER STANDPIPE TO EXISTING GROUNDING CONDUCTOR UNDER PLATFORM (REQUIRED TWO PLACES).
- (4) NOT USED
- (5) NOT USED
- (6) PROVIDE GROUNDING CONNECTION TO FIRE WATER MANHOLES USING # 6 AWG GROUNDING CONDUCTOR

CONTRACTOR SHALL CONTACT WMATA AR (AUTHORITY REPRESENTATIVE) TO DEFINE ACCEPTABLE WORKING HOURS, SPACE FOR STORAGE OF MATERIALS, PARKING, ETC.

GENERAL NOTES

- ALL MATERIALS PROVIDED SHALL BE UL LISTED, NEW AND CONFORM TO CONTRACT SPECIFICATIONS, DRAWINGS AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE
- ALL WORK SHALL COMPLY WITH REQUIREMENTS OF ALL LOCAL CODES AND REGULATIONS OF AUTHORITIES HAVING
- THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL CONTRACT DRAWINGS/SPECIFICATIONS AND BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIALS AND EQUIPMENT AT EACH LOCATION AS INDICATED, THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DO NOT INDICATE ALL PULL BOXES, OFFSETS, FITTINGS AND ACCESSORIES AS MAY BE REQUIRED. FURNISHING SUCH MATERIALS AS REQUIRED TO MEET FIELD CONDITIONS AND NEC REQUIREMENTS SHALL BE AT NO ADDITIONAL COST TO THE AUTHORITY.
- 5. THE CONTRACTOR SHALL EXAMINE THE SITE AND OBSERVE THE CONDITIONS UNDER WHICH THE WORK SHALL BE DONE OR OTHER CIRCUMSTANCES WHICH WILL AFFECT THE CONTEMPLATED WORK PRIOR TO SUBMITTING A BID. ANY REQUESTED VARIANCE TO THESE CONTRACT DOCUMENTS SHOULD BE SUBMITTED AS PART OF THE BID. ANY VARIANCE REQUIRED FOR FIELD CONDITIONS IDENTIFIED AFTER THE BID PERIOD WILL BE RESPONSIBILITY OF CONTRACTOR.
- 6. ALL RECEPTACLES ON PLATFORM SHALL BE GROUND FAULT PROTECTED WITH WEATHERPROOF COVER
- 7. INDICATED DIMENSIONS OF EQUIPMENT ARE APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE FINAL VERIFICATION OF ALL MEASUREMENTS SO THAT THE NEW EQUIPMENT CAN BE MANUFACTURED TO RETROFIT EXISTING CONDITIONS.
- THE CONTRACTOR SHALL ONLY WORK ON DE-ENERGIZED EQUIPMENT. ALL OUTAGES SHALL BE COORDINATED TROUGH WITH WMATA AR
- 9. CONTRACTOR SHALL TAKE PROPER ACTION TO SECURE AND PROTECT THE OPERATIONAL EQUIPMENT IN THE STATION OR FACILITY DURING CONTRACTOR'S WORK, TO PREVENT DAMAGE OR SHUT DOWN OF EQUIPMENT.
- 10. CONTRACTOR SHALL PROTECT EXISTING ELECTRICAL EQUIPMENT TO REMAIN FROM DUST AND WATER DURING CONTRACTOR'S WORK
- 11. ALL NEW EQUIPMENT TO BE INSTALLED SHALL BE STORED PROPERLY. EQUIPMENT DAMAGED DURING SHIPPING, HANDLING, STORAGE, WATER OR OTHER CAUSES SHOULD BE REPLACED AT CONTRACTOR'S EXPENSE.
- 12. CONTRACTOR SHALL TEMPORARILY STORE THE EXISTING REMOVED EQUIPMENT UNTIL ITS DISPOSAL. A STAGING AREA INSIDE THE FACILITY SHALL BE ESTABLISHED TO AVOID OBSTRUCTION TO EXISTING ELECTRICAL EQUIPMENT WITH LOCATION APPROVED BY WMATA AR. COORDINATE WITH THE AR TO DETERMINE WHETHER EQUIPMENT SHOULD BE RETURNED TO WMATA OR DISPOSED OF BY CONTRACTOR.
- 13. INTERRUPTION OF SERVICE TO EQUIPMENT SHALL BE KEPT TO A MINIMUM, SHALL OCCUR ONLY IN METRO NON-REVENUE HOURS AND SHALL BE COORDINATED WITH WMATA AR AT LEAST TWO WEEKS PRIOR TO THE REQUIRED OUTAGE.
- 14. CONTRACTOR SHALL OBTAIN & BECOME FAMILIAR WITH WMATA'S SAFETY AND OPERATING PROCEDURES & RULES. SAFETY TRAINING & CERTIFICATION FOR ALL CONTRACTOR EMPLOYEES ON THE WORK SITE IS MANDATORY.

15. A CLEAR AND UNOBSTRUCTED PATHWAY FROM TRACK TO STREET SHALL BE MAINTAINED AT ALL TIMES FOR PERSONNEL ACCESS. THIS INCLUDES PROHIBITING SUCH ACTIVITIES AS BLOCKING DOORWAYS, PATHWAYS OR STAIRS WITH EQUIPMENT AND MATERIALS, DISMANTLING STAIRS AND OBSTRUCTING STREET HATCHWAYS.

16. NOT USED, AM2)

17. ALL NEW POWER WIRES SHALL BE WITH RHW-2 INSULATION, LOW SMOKE, ZERO HALOGEN. ALL NEW CONDUITS - GRS TYPE. ALL MATERIALS AND INSTALLATION SHALL COMPLY WITH NFPA-130.

18. NOT USED. AM2

19. TO ACCOMMODATE PLATFORM STRUCTURAL REPAIR WORK, TEMPORARILY RELOCATE EXISTING UNDER PLATFORM CABLING, CONDUIT AND WIRING LOCATED WITHIN 24 INCHES OF PLATFORM EDGE AND ANY OTHER CONDUIT AND WIRING THAT MAY INTERFERE WITH STRUCTURAL WORK TO TRACK BED BELOW PLATFORM OVERHANG. PROTECT RELOCATED WIRING DURING STRUCTURAL REPAIR WORK. REINSTALL RELOCATED CABLING, CONDUIT, AND WIRING BACK TO ITS ORIGINAL LOCATION UPON CONCLUSION OF STRUCTURAL WORK. MAINTAIN CONTINUITY OF SERVICE TO ALL CABLING, WIRING, AND CONNECTED DEVICES AND SYSTEMS AT ALL TIMES.

(20. NOT USED. AM2)

21. WHERE PLATFORM MOUNTED EQUIPMENT IS SUPPLIED FROM BELOW, EXTEND OR REPLACE PORTION OF CONDUIT THAT STUBS-UP THROUGH PLATFORM TO ACCOMMODATE NEW PLATFORM THICKNESS, COORDINATE WITH STRUCTURAL

22. TEMPORARY LIGHTING

A. PROVIDE A TEMPORARY LIGHTING SYSTEM IN PUBLIC AREAS AFFECTED BY

SCOPE OF WORK INCLUDING BUT NOT LIMITED TO PLATFORMS AND ACCESS

PASSAGEWAYS. THE LIGHTING SYSTEM TO BE PROVIDED SHALL INCLUDE LIGHTING

FIXTURES, WIRING, RACEWAY, AND SUPPORTS; AND SHALL COMPLY WITH

DESIGN CRITERIA INCLUDING THE FOLLOWING:

- B. ILLUMINATION LEVELS SHALL BE 10FC (FOOT-CANDLES) AVERAGE AND 3FC MINIMIIM
- C. LIGHT SOURCE TYPE AND VOLTAGE SHALL BE IN ACCORDANCE WITH WMATA DESIGN CRITERIA
- D. A MINIMUM OF 20% OF FIXTURES SHALL BE DESIGNATED AS EMERGENCY

AND SHALL BE SUPPLIED FROM AN EMERGENCY SOURCE. EMERGENCY ILLUMINATION LEVELS SHALL COMPLY WITH WMATA DESIGN CRITERIA, INCLUDING THE REQUIREMENT OF 2 FC IN PLATFORMS AND ACCESS. PASSAGEWAYS AND 2.5 FC IN EMERGENCY EGRESS PATHS.

- E. COORDINATE WITH THE WMATA AR FOR USE OF EXISTING NORMAL AND EMERGENCY POWER SOURCE FOR NORMAL AND EMERGENCY TEMPORARY LIGHTING.
- PROVIDE A TEMPORARY LIGHTING SUBMITTAL SHOWING THE FOLLOWING: I PHOTOMETRIC PLANS TO DEMONSTRATE THAT THE PROPOSED LIGHTING PLAN

PROVIDE THE REQUIRED ILLUMINATION LEVELS.

- II PLANS SHOWING PROPOSED LOCATIONS OF LIGHT FIXTURES, MOUNTING HEIGHTS.
- MOUNTING DETAILS, POWER SOURCE(S), ROUTING AND SUPPORT MEANS OF ALL
- TEMPORARY SUPPLY WIRING. INCLUDE LOCATION OF PROPOSED POWER SOURCES AND ANY ANCILLARY EQUIPMENT.
- III CATALOG CUTS OF PROPOSED TEMPORARY LIGHTING FIXTURE TYPES, WATTAGES
- VOLTAGES AND LUMEN OUTPUT, AND ALL WIRING, RACEWAY, AND SUPPORT MEANS. IV IF EXISTING PANELS ARE TO BE USED AS THE POWER SOURCE, SHOW
- ROUTING FROM POWER SOURCE. SHOW NUMBER OF CIRCUITS REQUIRED AND TOTAL LOAD IN
- KVA. VERIFY EXISTING PANEL HAS SUFFICIENT SPARE CAPACITY TO ACCOMMODATE
- LIGHTING LOAD BEING ADDED.
- 23. RESTORE ALL STRAY CURRENT CONDUCTORS AFFECTED BY CONSTRUCTION TO ORIGINAL CONDITION.
- 24. ALL REMOVED AND REPLACED EQUIPMENT, FIXTURES, CABLES, WIRING CONDUIT AND JUNCTION BOXES SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF IN A LEGAL MANNER

₿INAL

FQ15093

REFERENCE DRAWINGS REVISIONS DESIGNED K. IBRAHIM 01/30/ DESCRIPTION 6/15 K. I. REVISED NOTES 01/30/ CHECKED A FISHEL 01/30/ DATE APPROVED J. PURDY



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 43224, EXPIRATION DATE 04-14-2015.

APPROVED



PROJECT MANAGER

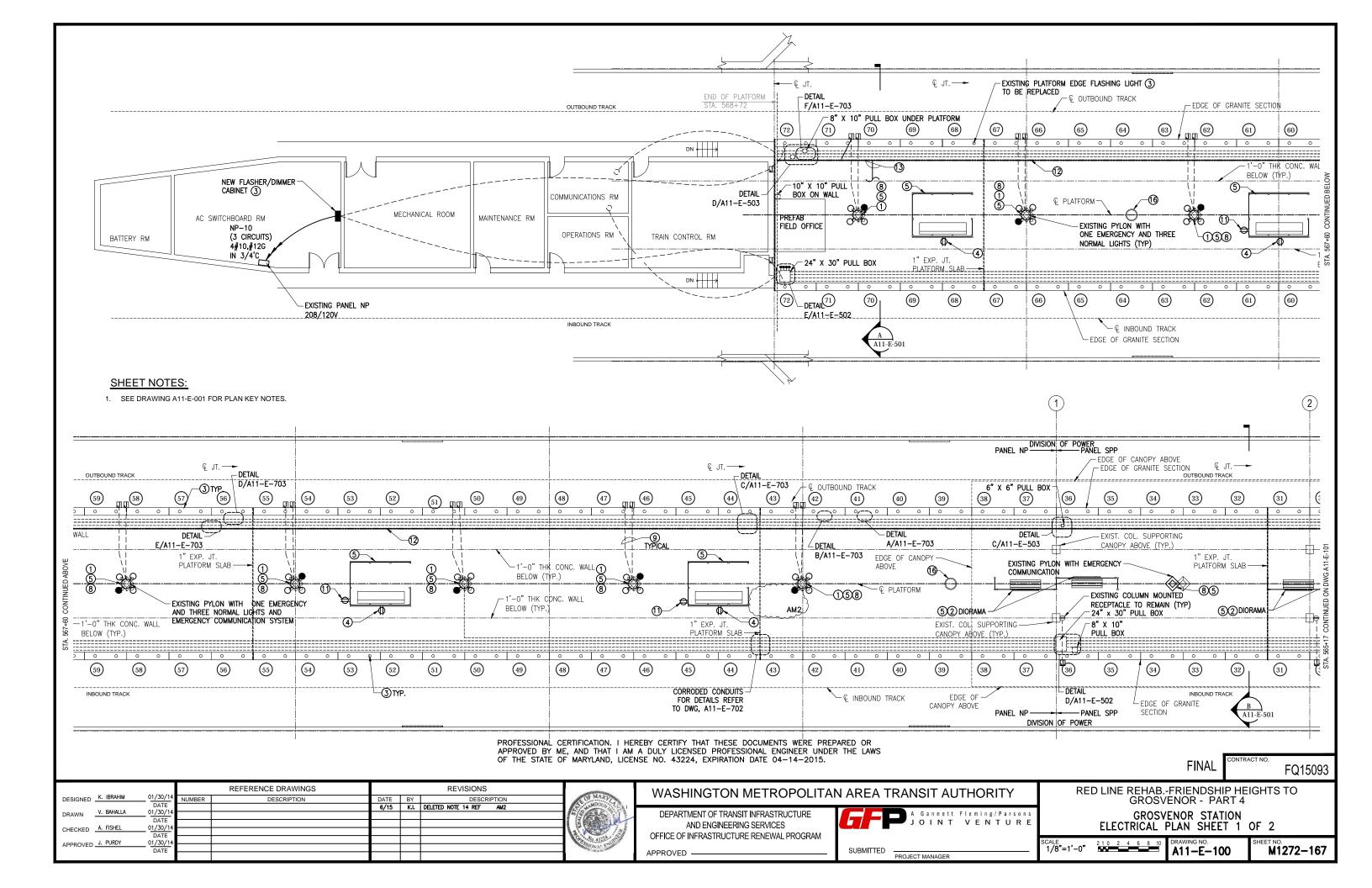
RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR - PART 4

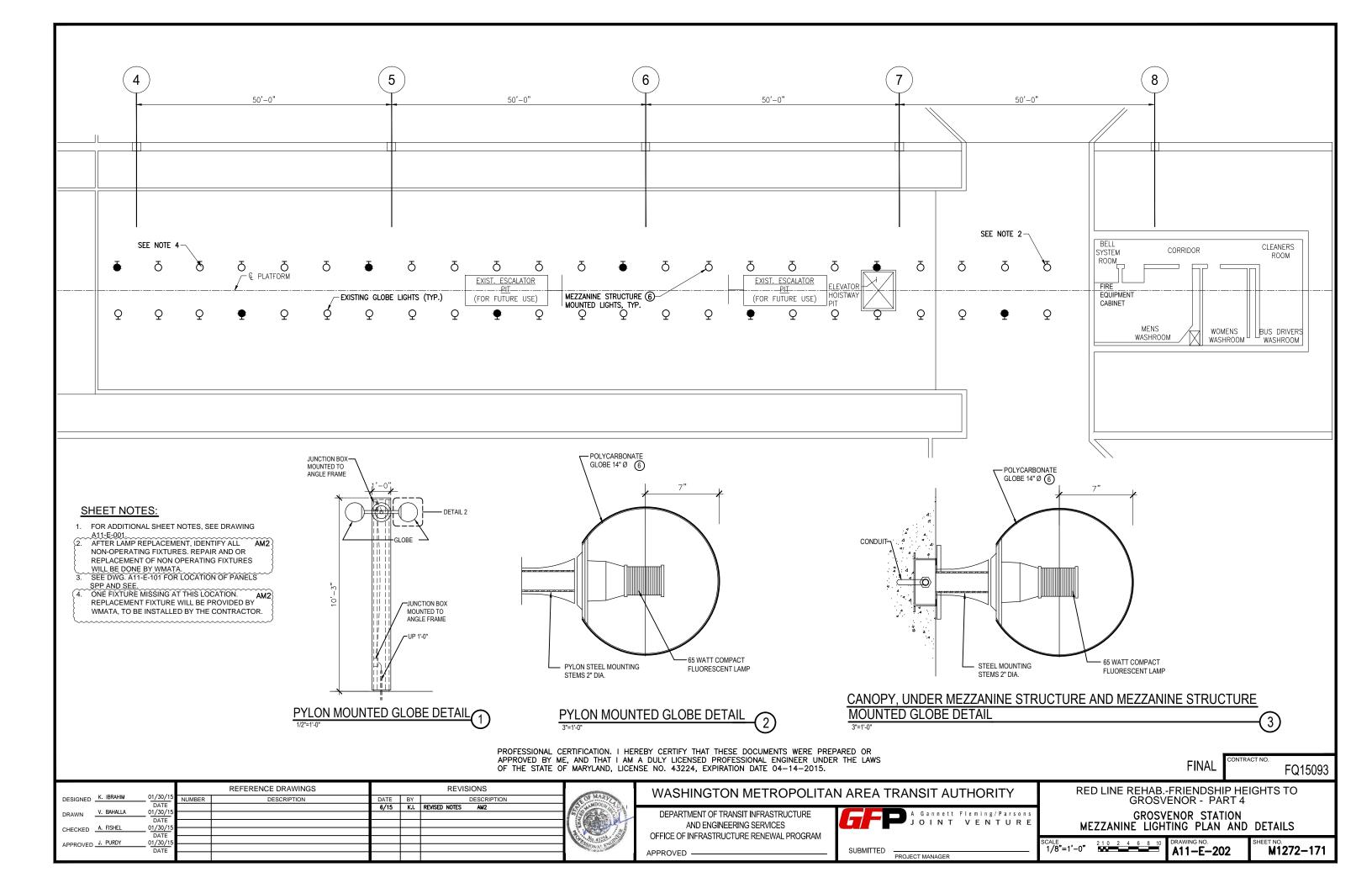
GROSVENOR STATION SCOPE OF ELECTRICAL WORK AND GENERAL NOTES

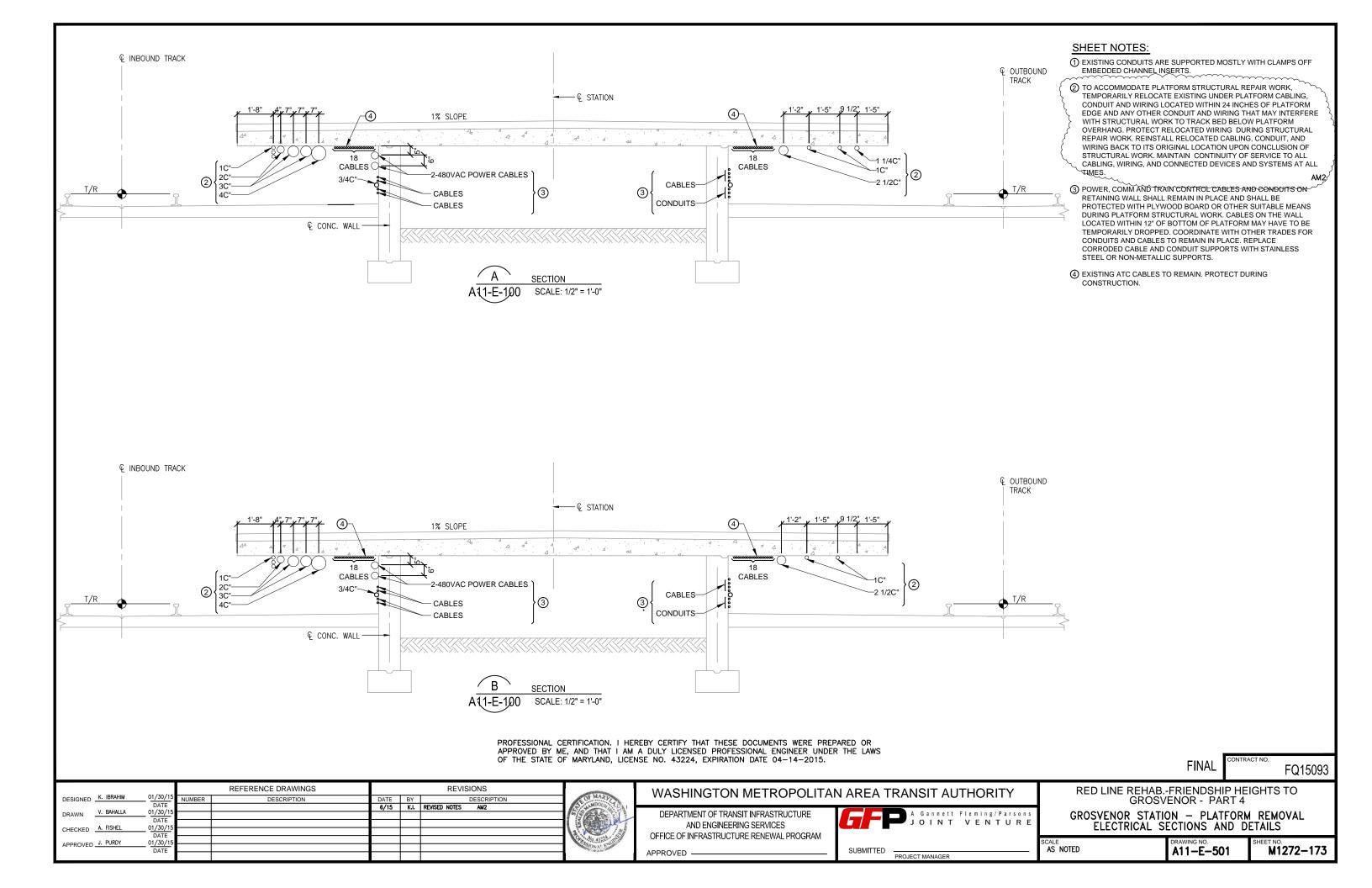
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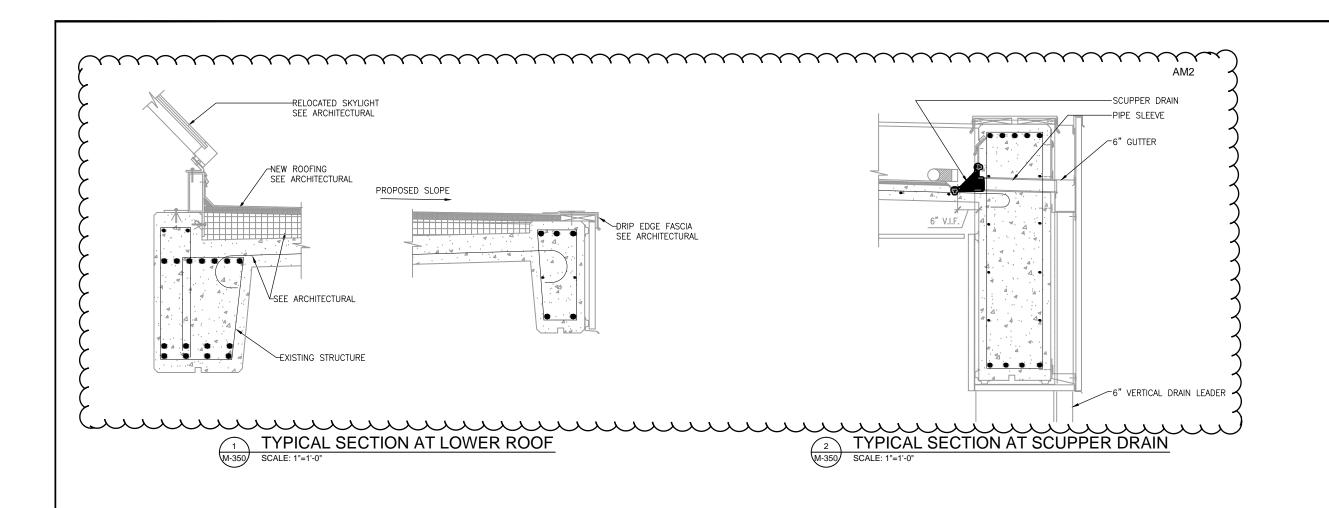
A11-E-001

M1272-166









6" 3" 0 3" 6" 1 SCALE: 1" = 1'-0"

FINAL

FQ15093

			REFERENCE DRAWINGS			REVISIONS
DESIGNED DPR	01/2015	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
	DATE			07/2015	DPR	UPDATE OF ARCH BACKGROUND - AM2
DRAWN DPR	DATE					
CHECKED CMR	01/2015					
CHECKED CMR	DATE					
APPROVED JP	01/2015					
AFFROVED	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
APPROVED



RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR - PART 5

MECHANICAL ROOF PROPOSED SECTIONS

SCALE DRAWING NO. SHEET NO. M1272-188

GENERAL NOTES

- 1. GENERAL NOTES ARE TO BE READ IN CONJUNCTION WITH THE DESIGN SPECIFICATIONS AND THESE DRAWINGS.
- 2. ALL DIMENSIONS OF EXISTING STRUCTURES ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LOCATIONS, DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES, UTILITIES, ETC. ANY DISCREPANCIES ARISING BETWEEN EXISTING CONDITIONS AND DETAILS SHOWN ON CONTRACT PLANS SHALL BE REPORTED TO THE ENGINEER FOR RESOLUTION.
- 3. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONAL INFORMATION.
- 4. THE CONTRACTOR SHALL INSPECT THE SITE AND BECOME INFORMED AS TO THE CURRENT CONDITION OF THE PREMISES AND THE EXTENT AND CHARACTER OF WORK REQUIRED.
- 5. THE DRAWINGS ARE INTENDED TO INDICATE THE EXTENT OF THE WORK DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL FURNISH ALL ITEMS NECESSARY TO ACCOMPLISH THE WORK AS INTENDED WHETHER OR NOT THE ITEMS APPEAR ON THE DRAWINGS OR SPECIFICATIONS.
- 6. COORDINATE ALL STRUCTURAL WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.

NEW WORK NOTES

- 1. PROVIDE RED LINE TUNNEL REHABILITATION FROM FRIENDSHIP HEIGHTS TO GROSVENOR STATION. STATION LIMITS FOR WORK ARE FROM 306+00 TO 509+98 EXCLUDING ALL STATIONS AND MEDICAL CENTER CROSSOVER.
- 2. NEW WORK SHALL INCLUDE BUT NOT LIMITED TO REPAIR OF EXISTING CONCRETE,
- PLINTH REMOVAL, COATING APPLICATION, AND POWER WASHING.

 3. FOR POWER WASHING REQUIREMENTS, SEE SPECIFICATION 03371. FOR LIMITS AND ADDITIONAL INFORMATION SEE POWER WASHING NOTES THIS SHEET.
- 4. FOR CONCRETE REPAIR SEE SPECIFICATION 03720. SEE DRAWINGS FOR REPAIR TABLE AND DETAILS.
- 5. FOR WATERPROOFING COATING REQUIREMENTS. SEE SPECIFICATION 09901. FOR LIMITS SEE MEDICAL CENTER PASSAGEWAY DRAWINGS.
- 6. ALL NEW WORK SHALL COMPLY WITH NATIONAL, STATE, AND LOCAL CODE REQUIREMENTS.

POWER WASHING NOTES

- 1. POWER WASH TUNNELS FROM STATION 309+28 TO 509+98. TAKE CARE TO AVOID DAMAGE TO ELECTRICALLY POWERED EQUIPMENT, BOXES, LIGHTS, ETC. SEE TUNNEL MECHANICAL DRAWINGS FOR CLEANING OF DRAINAGE SYSTEM.
- 2. POWER WASH TUNNELS PRIOR TO STARTING ANY OTHER REHABILITATION WORK IN THE WORK AREA TO THE LIMITS SHOWN.
- 3. USE HAND OR POWER TOOL CLEANING IS REQUIRED AFTER THE TUNNELS HAVE BEEN POWER WASHED IN AREAS OF HEAVY CALCITE BUILD UP PRIOR TO PERFORMING STRUCTURAL REPAIRS.
- 4. USE HAND REMOVAL METHODS TO REMOVE HEAVY CALCITE BUILD UP FROM ELECTRICAL CABLE, SEE TUNNEL ELECTRICAL DRAWINGS.
- 5 CLEAN ALL SIGNAGE AND STATION MAKERS IN THE TUNNELS.
- (6. NO SURFACE PROFILE REQUIRED. AM2)

REPAIR NOTES

- 1. REPAIR DETAILS ARE SHOWN ON DRAWING S-500 AND S-501. TRACK NUMBER, APPROXIMATE STATION MARKER, CLOCK AND REPAIR DETAIL TYPE ARE SHOWN IN DEFECT REPAIR TABLES.
- 2. TRACK 1 AND TRACK 2 DEFECT REPAIR SUMMARY TABLES LIST ESTIMATED QUANTITY FOR EACH TYPE OF REPAIR BASED ON CONDITION OBSERVED DURING INSPECTION.
- 3. CONTRACTOR SHALL LOCATE DEFECTS IN THE FIELD BASED ON DEFECT REPAIR TABLES. FIELD VERIFY THE LOCATION, DEFECT LENGTH AND CHECK FOR ANY ADDITIONAL DEFECTS THAT ARE NOT IDENTIFIED. APPROVAL FROM AUTHORITY REPRESENTATIVE SHALL BE OBTAINED PRIOR TO STARTING REPAIR WORK.
- TYPE 1 REPAIR TO BE USED WHERE THERE IS RUNNING OR DRIPPING WATER. AFTER REPAIR IS COMPLETED THERE SHOULD NOT BE RUNNING OR DRIPPING WATER. IT IS ACCEPTABLE TO HAVE DAMP OR WET AREA. IN SOME CASES WHEN INJECTION IS NOT SUCCESSFUL AFTER SECOND INJECTION AND LEAKING/DRIPPING IS MINIMUM AUTHORITY REPRESENTATIVE WILL MAKE A DETERMINATION IF THE REPAIR IS ACCEPTABLE. ALL TYPE 1 REPAIRS TO BE INSPECTED AT A MINIMUM 1 WEEK AND A MAXIMUM 2 WEEKS AFTER INJECTION WAS COMPLETED TO DETERMINE IF THE REPAIR IS ACCEPTABLE.
- 5. ALL SPALL REPAIRS IDENTIFIED IN THE DEFECT REPAIR TABLES SHALL BE COMPLETED. ANY SPALLS 1/4 INCH DEEP OR DEEPER FOUND ON TOP OF THE SAFETY WALKS, BUT NOT LISTED IN THE TABLE SHALL ALSO BE REPAIRED.

STRUCTURAL ABBREVIATIONS

APPROX APPROX ARCH BM BEAM BRG BEARIN BOT BOTTON B/ST BOTTON	IATE XIMATELY ECTURAL IF G ILV IF IN	INSIDE DIAMETER INSIDE FACE JOINT LINEAR FEET LONG LONG LEG VERTICAL MATERIAL MAXIMUM MECHANICAL/ELECTRICAL, PLUMBING MANHOLE MINIMUM NEAR SIDE NOT TO SCALE OPENING OUTSIDE FACE PLATE POLYVINYL CHLORIDE RADIUS REINFORCEMENT REQUIRED SLIP CRITICAL
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"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WHERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 22331, EXPIRATION DATE: 05-03-2015."

FINAL

FQ15093

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM



PROJECT MANAGER

STRUCTURAL NOTES AND ABBREVIATIONS

RED LINE REHAB.-FRIENDSHIP HEIGHTS TO

GROSVENOR - PART 1

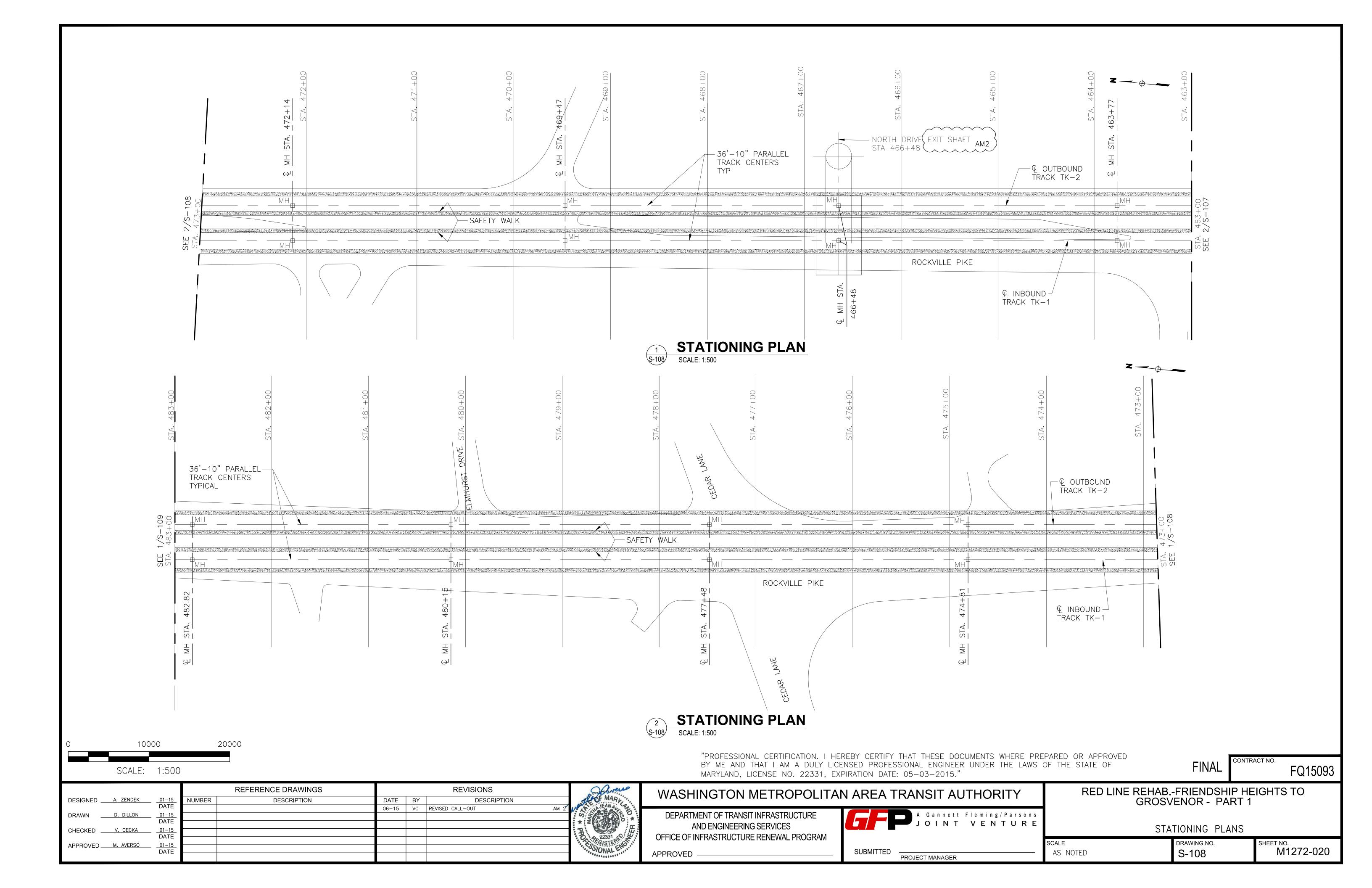
 SCALE
 DRAWING NO.
 SHEET NO.

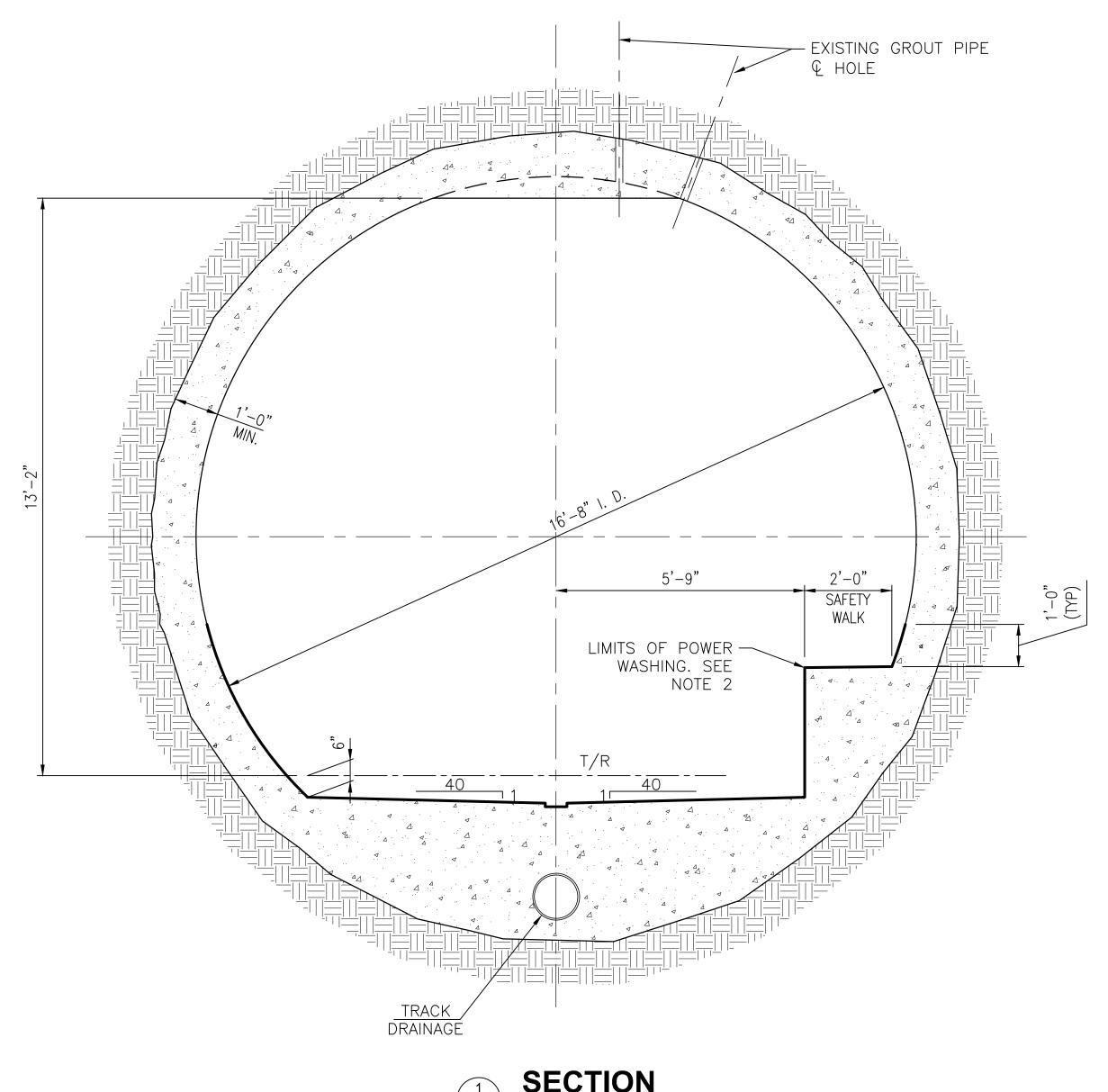
 NO SCALE
 S-001
 M1272-011

DESIGNED A. ZENDEK 01-15 DATE
DRAWN D. DILLON 01-15 DATE
CHECKED V. CECKA 01-15 DATE
APPROVED M. AVERSO 01-15 DATE

VISIONAL ENGINEERS

APPROVED





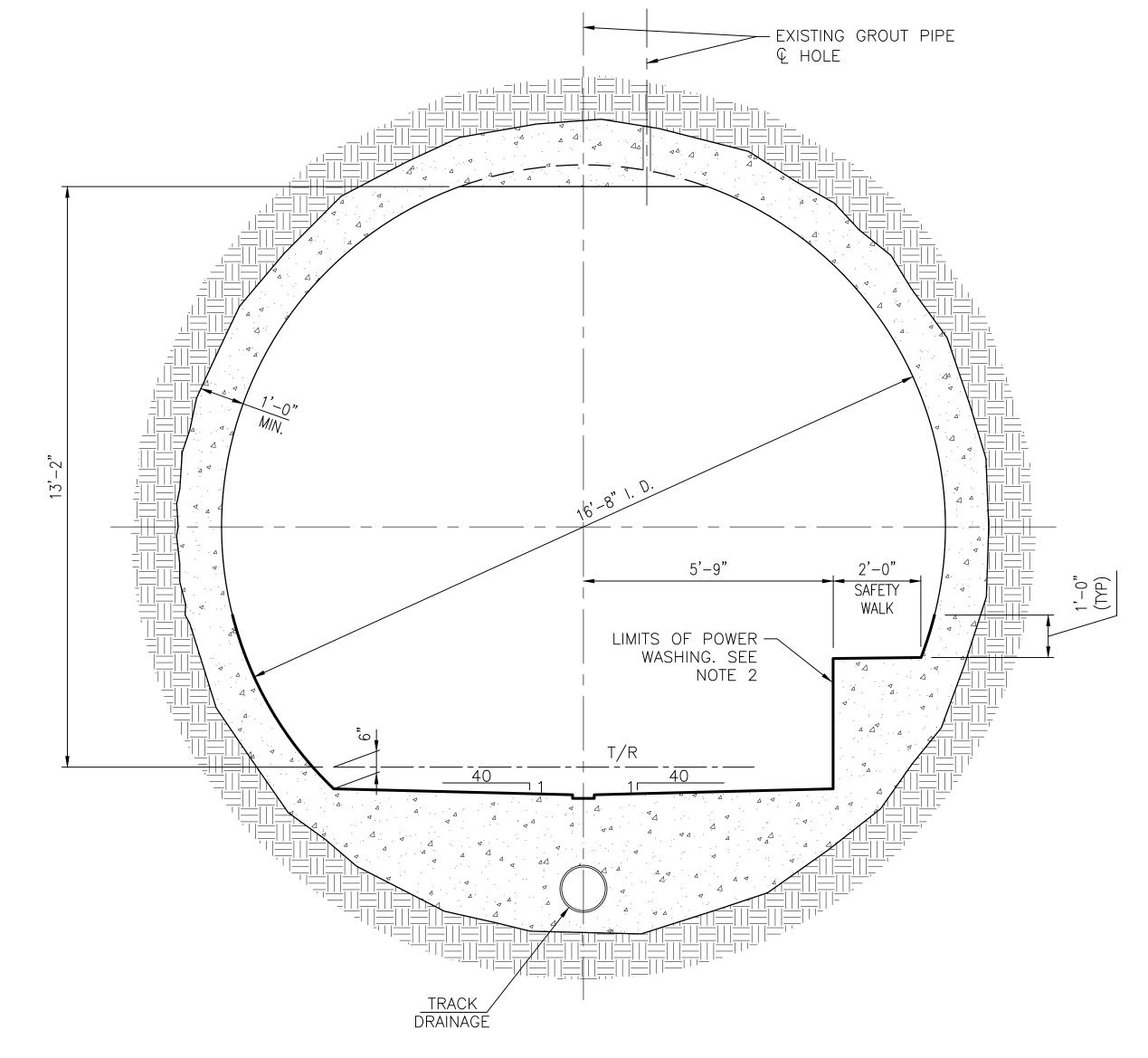
SECTION SCALE: 1/2" = 1'-0"

<u>NOTES</u>

SCALE: 1/2"=1'-0"

- 1. SECTION APPLIES TO STA. 309+24 TO 329+00 AND STA. 336+00 TO 389+00 EXCEPT AS ALTERED BY EXIT SHAFT STRUCTURES. AM2)
- 2. ALL SIGNAGE IN TUNNEL TO BE POWER WASHED ALSO.

 3. SEE POWER WASHING NOTES ON S-001 FOR POWER WASHING STATION LIMITS.



SECTION

<u>NOTES</u>

1. SECTION APPLIES TO INBOUND STA. 397+11 TO 440+24.02 AND OUTBOUND STA. 397+51.50 TO 440+24.02 SECTION APPLIES IN BOTH DIRECTIONS FROM 452+14.92 TO 496+50.00. SECTION ALTERED BY EXITAM2 SHAFT STRUCTURES. AM2 SEE POWER WASHING NOTES ON S-001 FOR POWER WASHING STATION

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WHERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 22331, EXPIRATION DATE: 05-03-2015."

FQ15093

REFERENCE DRAWINGS REVISIONS DATE BY DESIGNED _____A. ZENDEK DESCRIPTION DESCRIPTION NUMBER 06-15 VC REVISED NOTES D. DILLON DATE CHECKED V. CECKA APPROVED M. AVERSO

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED -

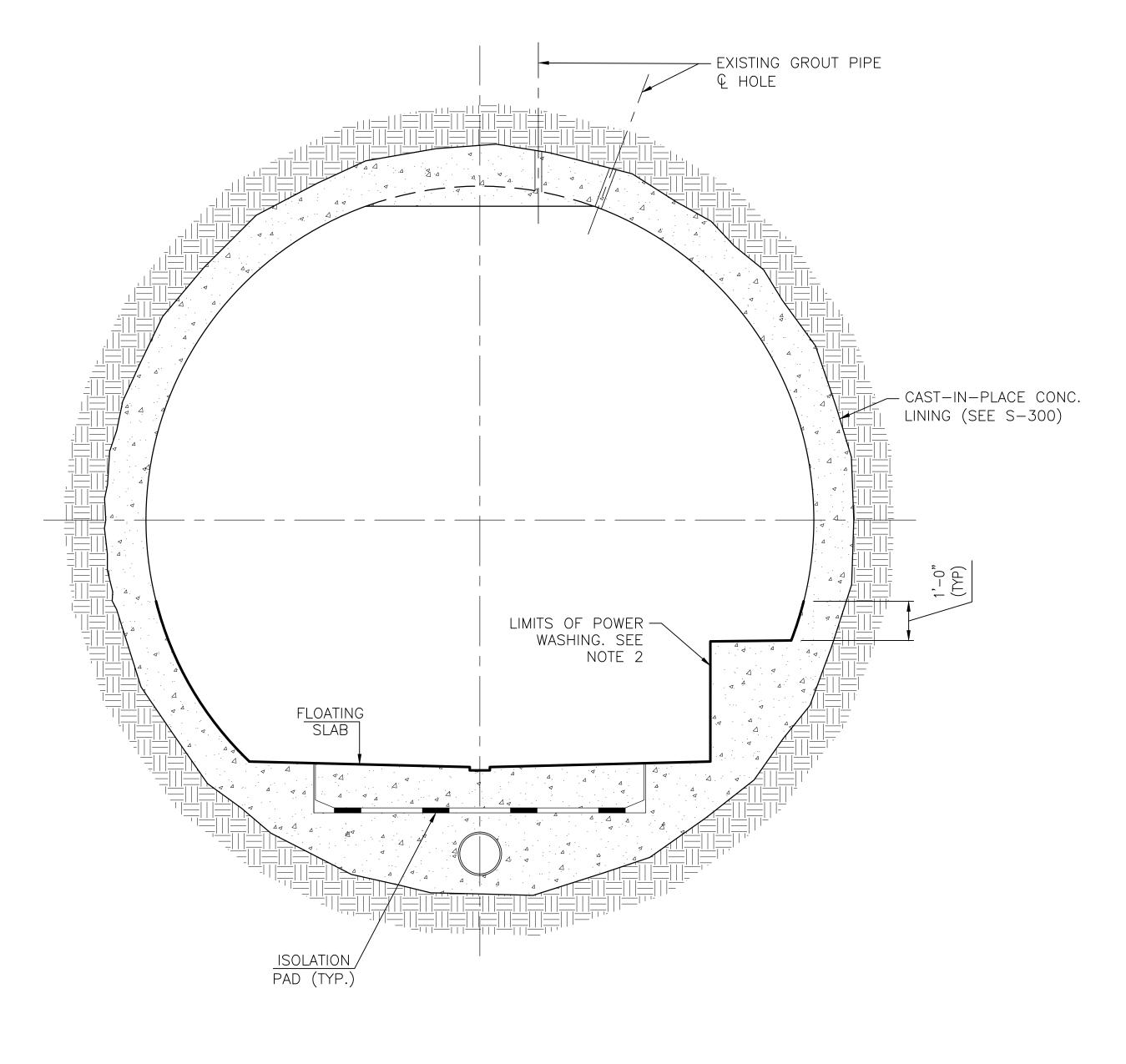
A Gannett Fleming/Parsons
JOINT VENTURE

PROJECT MANAGER

RED LINE REHAB.-FRIENDSHIP HEIGHTS TO **GROSVENOR - PART 1**

SECTIONS

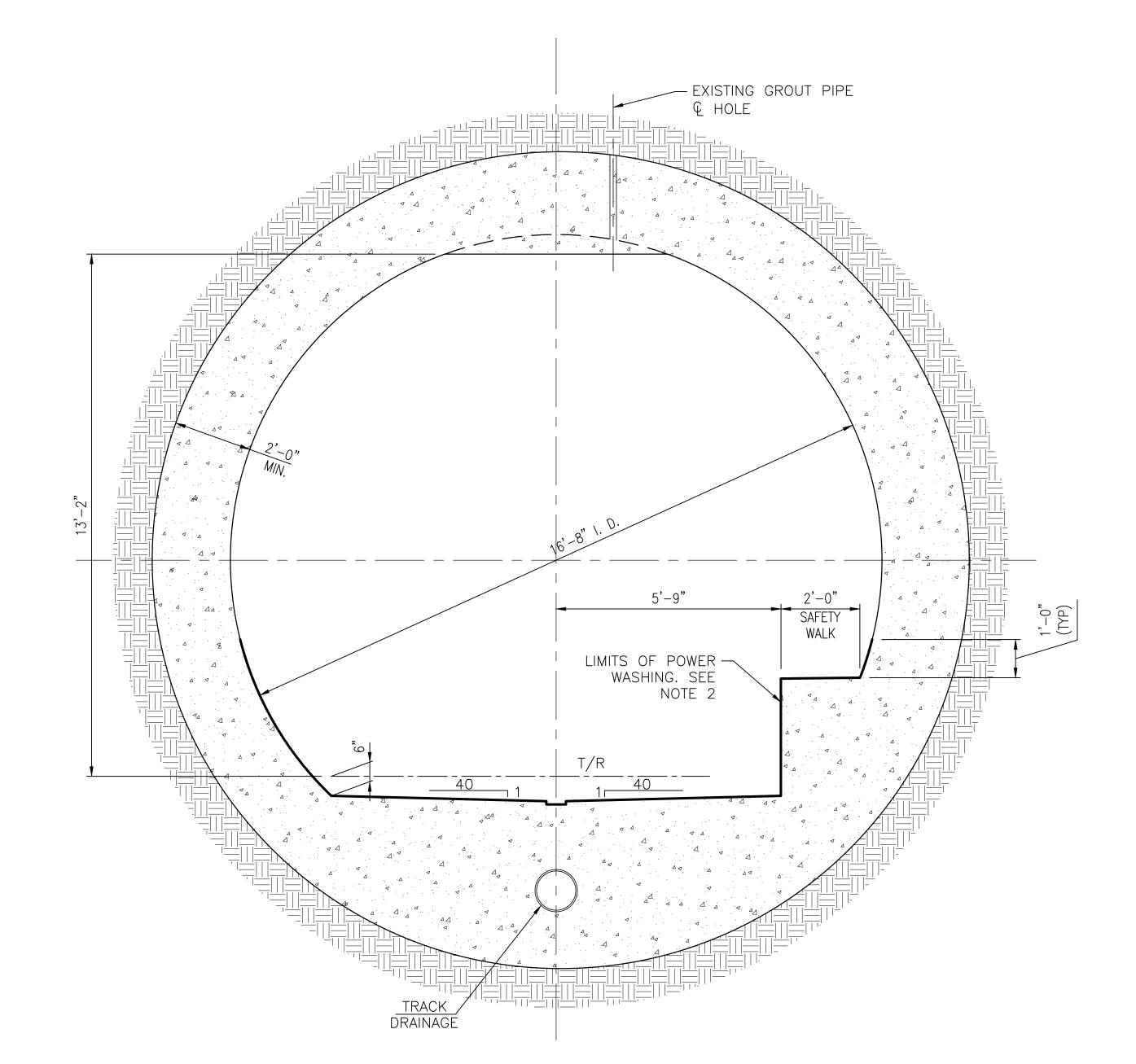
SCALE DRAWING NO. M1272-023 S-300 AS NOTED





NOTES:

- SECTION APPLIES TO STA. 329+00 TO 336+00 EXCEPT AS ALTERED BY EXIT SHAFT STRUCTURES. AM2 ALL SIGNAGE IN TUNNEL TO BE POWER WASHED ALSO.
- SEE POWER WASHING NOTES ON S-001 FOR POWER WASHING STATION LIMITS.





NOTES:

- SECTION APPLIES TO STA. 496+50 TO 502+50 EXCEPT AS ALTERED BY
- { EXIT SHAFT STRUCTURES. AM2 }
 ALL SIGNAGE IN TUNNEL TO BE POWER WASHED ALSO. SEE POWER WASHING NOTES ON S-001 FOR POWER WASHING STATION

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WHERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 22331, EXPIRATION DATE: 05-03-2015."

FQ15093

SCALE: 1/2"=1'-0"REFERENCE DRAWINGS REVISIONS DATE BY DESCRIPTION DESCRIPTION DESIGNED A. ZENDEK NUMBER 06-15 VC REVISED NOTES 01-15 DATE CHECKED V. CECKA APPROVED M. AVERSO

APPROVED -

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

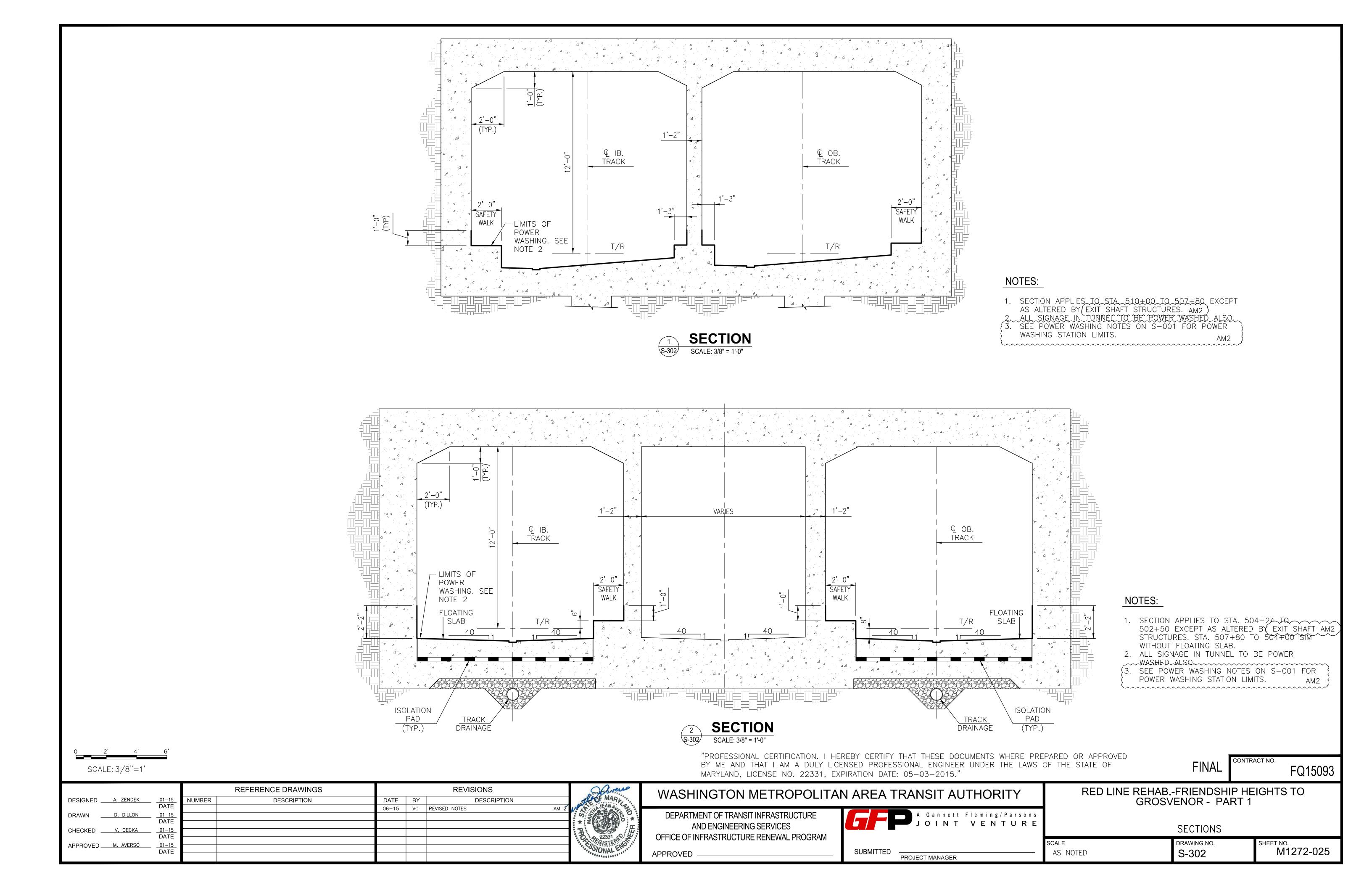
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			Fleming/Parsons VENTURE	

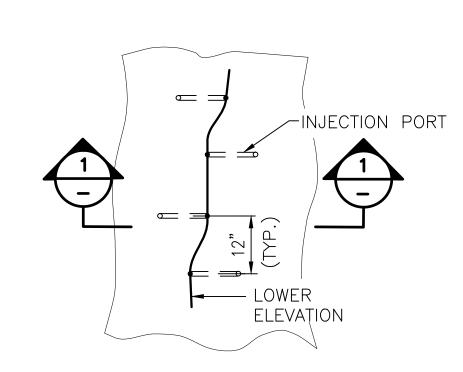
PROJECT MANAGER

RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR - PART 1

SECT	IONS

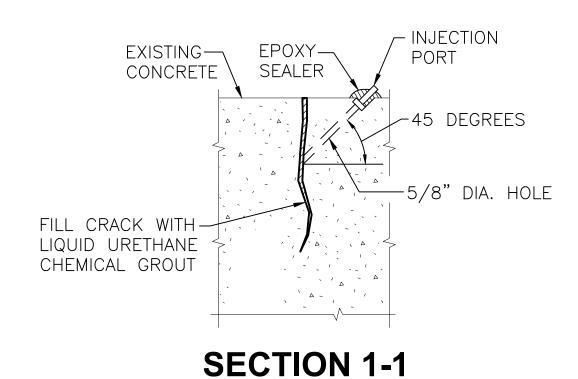
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CALE AS NOTED	DRAWING NO. S-301	SHEET NO. M1272-024

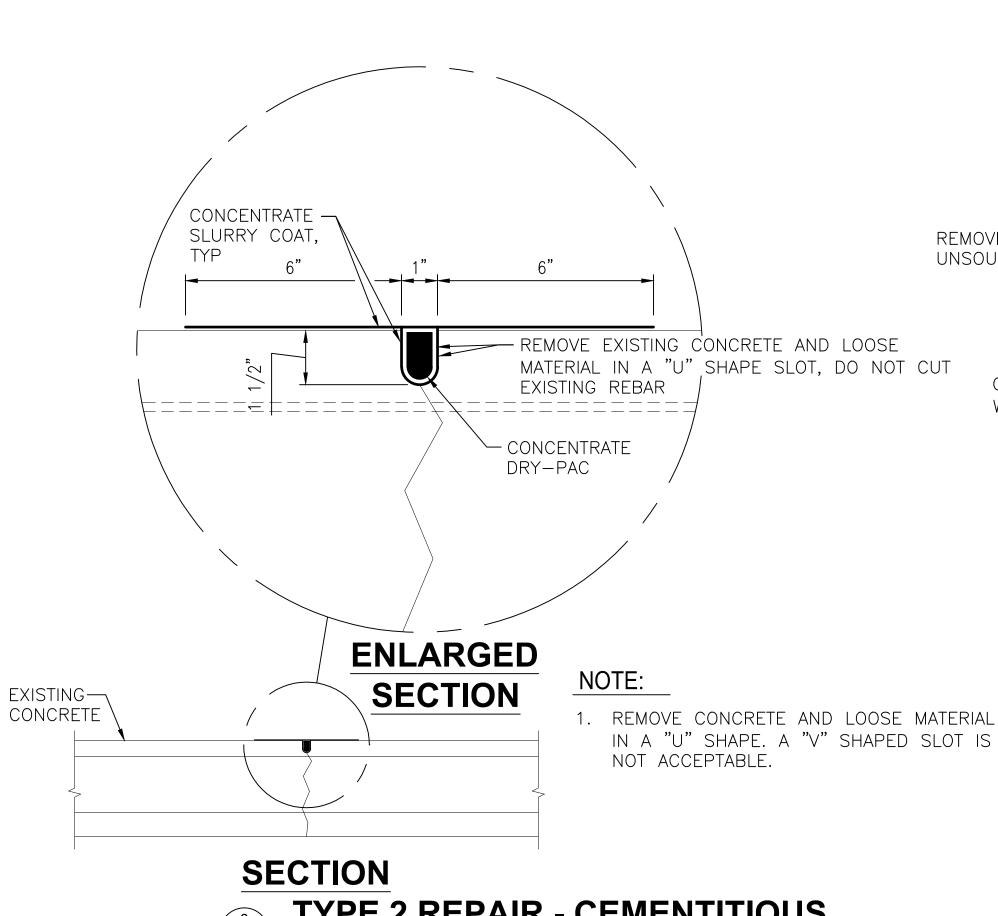




TYPE 1 REPAIR - INJECTION SCALE: NTS

(FOR HORIZONTAL, VERTICAL, AND OVERHEAD REPAIRS)

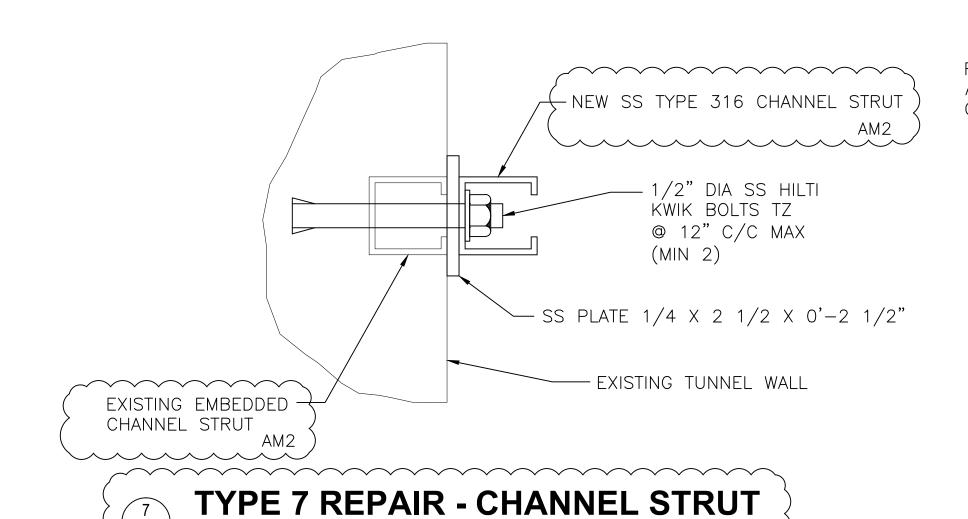




IN A "U" SHAPE. A "V" SHAPED SLOT IS

TYPE 2 REPAIR - CEMENTITIOUS

(FOR HORIZONTAL, VERTICAL, AND OVERHEAD REPAIRS)

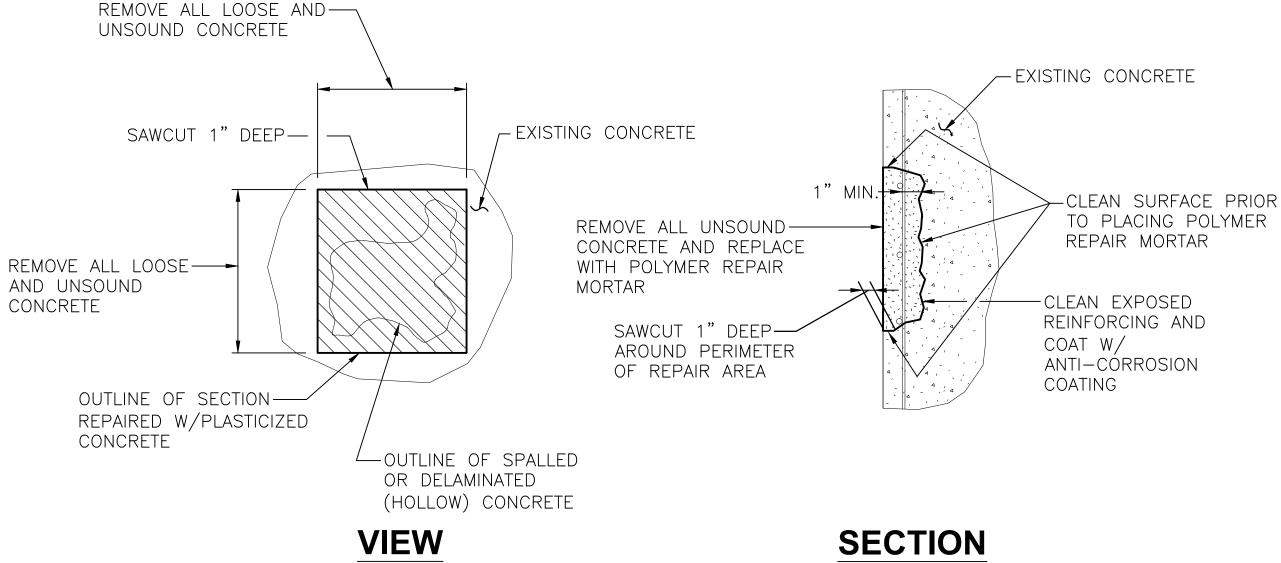


REMOVE ALL LOOSE AND — - EXISTING CONCRETE UNSOUND CONCRETE SAWCUT 1" DEEP ----EXISTING CONCRETE - CLEAN SURFACE PRIOR TO PLACING MORTAR POLYMER REPAIR -MORTAR REMOVE ALL LOOSE AND ---UNSOUND CONCRETE SAWCUT 1" DEEP-+\\ 1" MAX.**→** OUTLINE OF SECTION REPAIRED LOUTLINE OF SPALLED OR W/POLYMER REPAIR MORTAR. DELAMINATED (HOLLOW) CONCRETE WITH NO RÉBAR EXPOSED

> **VIEW SECTION**

TYPE 3 REPAIR - SHALLOW SPALL SCALE: NTS

(FOR HORIZONTAL, VERTICAL, AND OVERHEAD REPAIRS)



TYPE 4 REPAIR - DEEP SPALL SCALE: NTS

(FOR HORIZONTAL, VERTICAL, AND OVERHEAD REPAIRS)

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FINAL

FQ15093

	REFERENCE DRAWINGS	REVISIONS
DESIGNED A. ZENDEK 01-15	NUMBER DESCRIPTION	DATE BY DESCRIPTION 06-15 VC CHANGED UNISTRUT TO CHANNEL STRUT AM 7
DATE		06-15 VC CHANGED UNISTRUT TO CHANNEL STRUT AM 2
DRAWN <u>D. DILLON</u> <u>01–15</u> DATE		TIME OF THE STATE
CHECKED V. CECKA 01-15 DATE		
APPROVED M. AVERSO 01-15 DATE		

S-500

SCALE: NTS



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED

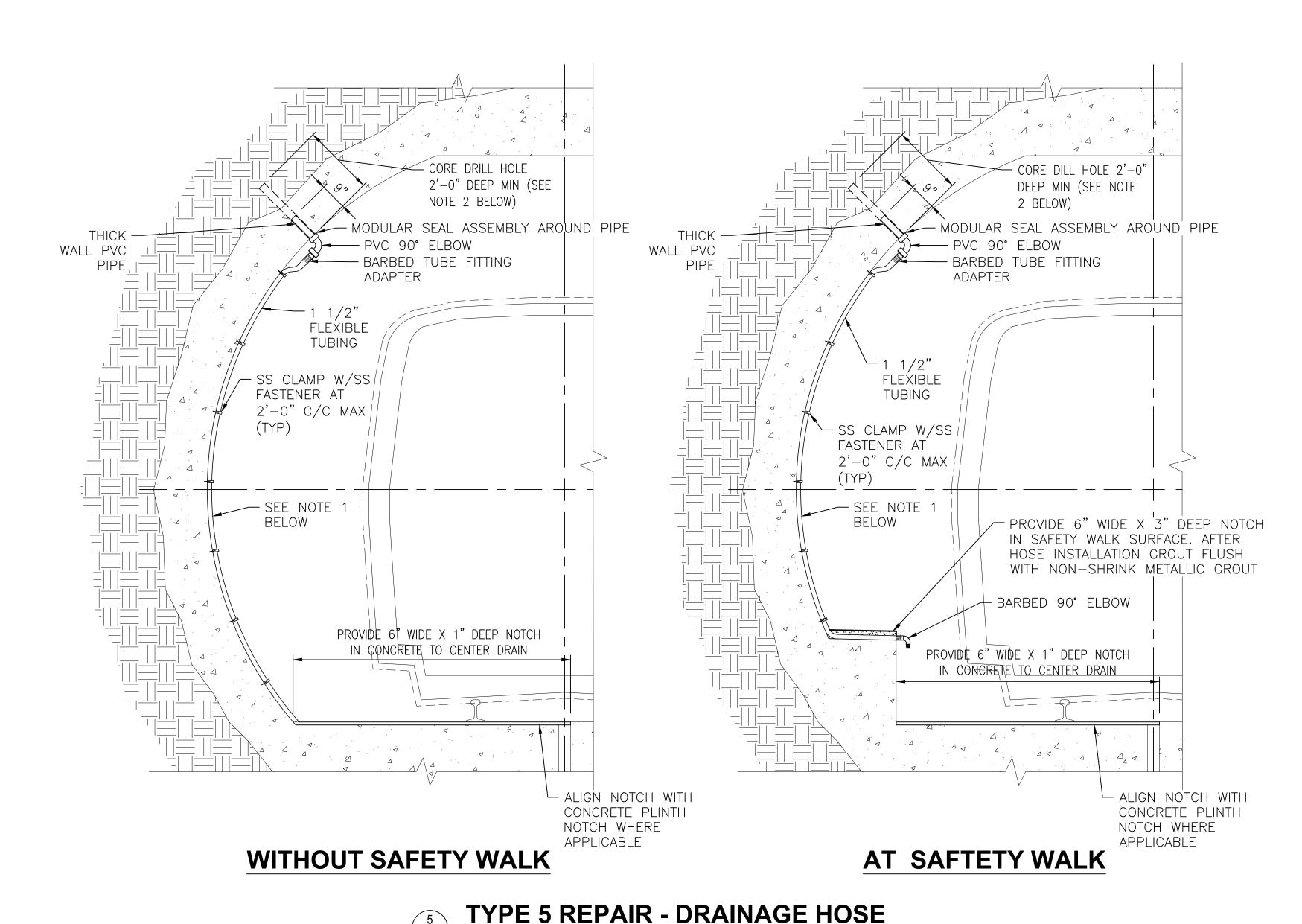
A Gannett Fleming/Parsons
JOINT VENTURE SCALE AS NOTED

PROJECT MANAGER

RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR - PART 1

REPAIR DETAILS

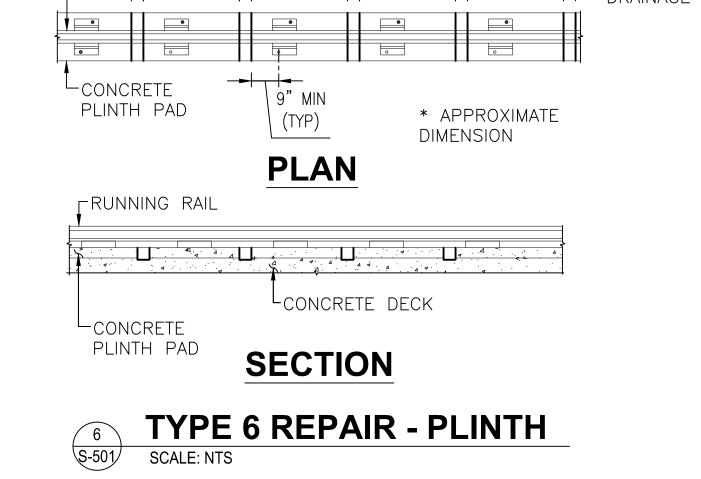
DRAWING NO. M1272-032 S-500



SCALE: 1/2" = 1'-0"

NOTES:

- 1. AT LOCATIONS THAT HOSE DOES NOT FIT BEHIND EXISTING CONDUITS, INSTALL FLEXIBLE HOSE IN
- FRONT OF CONDUITS. 2. COORDINATE HOLE DIAMETER WITH MODULAR SEAL ASSEMBLY REQUIREMENTS.



RUNNING RAIL

NOTES:

- 1. AREAS WHERE THERE ARE NO SLOTS IN CONTINUOUS PLINTH PAD ARE NOT SHOWN ON DRAWINGS.
- 2. CONTRACTOR TO SURVEY AND LOCATE ALL AREAS WITHIN THIS CONTRACT'S LIMITS (BOTH TRACKS) TO
- DETERMINE LOCATIONS OF CONTINUOUS PLINTH PADS WITH NO DRAINAGE SLOTS. 3. CUT SLOTS IN CONTINUOUS RAD TO ALLOW FOR WATER TO DRAIN TO CENTER TRACK DRAIN.
- (4. SEE SPECIFICATION 00434 FOR PRICE PROPOSAL FOR TYPE 6 REPAIR.) AM2 5. STANDING WATER BETWEEN RAIL AND CONCRETE WALL CAUSED BY IMPROPER SLOPE, COLLECTED DIRT, AND CONTINUOUS PLINTHS. LIST OF APPROXIMATE STANDING WATER LOCATIONS SHOWN BELOW.

TRACK 1

326+40	328+00	328+40	329+00	336+88	337+50	339+00
342+80	343-20	344+80	345+20	345+50	345+90	347+90
348+10	349+20	352+30	354+50	358+50	363+30	363+40
363+80	363+32	363+70	364+40	364+80	365+80	376+00
368+40	368+80	369+45	364+80	367+00	368+40	368+80
369+40	370+31	373+85	375+00	375+60	375+90	376+25
378+75	380+20	380+90	381+75	383+00	385+50	388+00
388+20	396+00	397+00	399+20	399+70	400+00	400+60
401+00	402+10	402+90	403+05	403+50	404+05	406+70
406+80	407+00	407+00	407+30	407+50	407+60	407+70
408+30	408+70	408+85	408+90	409+40	417+90	424+50
426+20	428+00	428+40	430+05	432+00	432+10	432+32
432+85	433+50	434+75	435+40	436+25	438+50	450+60
453+50	455+00	456+65	456+70	461+85	462+00	462+30
465+00	465+30	468+60	470+30	471+00	476+00	478+00
479+80	482+40	484+50	485+50	486+30	486+52	488+00
489+60	491+20	494+50	495+00	497+00	497+60	498+00
498+50	498+90					

TRACK 2

308+90	309+40	310+00	311+00	313+00	317+20	318+00
319+00	322+00	323+00	324+20	324+60	325+00	326+80
337+00	338+00	339+15	339+55	339+90	340+90	341+40
341+80	346+50	350+75	351+30	356+00	359+75	360+00
362+00	405+60	406+10	408+15	409+25	416+10	418+50
422+50	451+10	451+40	453+40	453+60	458+40	460+90
461+10	463+60	463+65	463+77	486+50	488+00	495+80
495+90	498+15					

SCALE

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WHERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 22331, EXPIRATION DATE: 05-03-2015."

FQ15093

SCALE: 1/2"=1'-0"REFERENCE DRAWINGS REVISIONS DESCRIPTION DESCRIPTION DATE BY DESIGNED A. ZENDEK NUMBER 06-15 VC REVISED NOTE 4 D. DILLON CHECKED V. CECKA APPROVED M. AVERSO

APPROVED

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

A Gannett Fleming/Parsons
JOINT VENTURE

PROJECT MANAGER

RED LINE REHAB.-FRIENDSHIP HEIGHTS TO **GROSVENOR - PART 1**

REPAIR DETAILS

DRAWING NO. M1272-033 AS NOTED S-501

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DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE

APPROVED —

STATE OF MARYLAND, LICENSE NO. 45732, EXPIRATION DATE 07-22-2016

REFERENCE DRAWINGS **REVISIONS** DATE NUMBER DESIGNED CF DATE BY DESCRIPTION DESCRIPTION 05-15 JP REFERENCE DRAWINGS ADDED AM 1 AM 2 AM 2 02-15 DATE 06-15 JP SHEETS GOO3C & GOO3D ADDED DRAWN 06-15 JP PART 2 REFERENCE DRAWINGS ADDED 02-15 DATE CHECKED JT 02-15 DATE APPROVED <u>JP</u>



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM



PROJECT MANAGER

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RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR

FINAL

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FQ15093

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CHECKED JT 02-15 DATE	AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM	
APPROVED JP 02-15 DATE	APPROVED SUBMITTE	$\frac{10}{10} = \frac{\frac{\text{SCALE}}{\text{AS SHOWN}}}{\frac{\text{DROUBCT MANAGER}}{\text{AS SHOWN}}} = \frac{\frac{\text{DRAWING NO.}}{\text{SHEET NO.}}}{\frac{\text{SHEET NO.}}{\text{M1272} - 003}}$
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PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45732, EXPIRATION DATE 07-22-2016

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M220-291 A13-S-141 M220-292 A13-S-131 M220-293 A13-S-148 M220-294 A13-S-159 M220-295 A13-S-149 M220-296 A13-S-150 M220-297 A13-S-137 M220-298 A13-S-138 M220-299 A13-S-134 M220-300 A13-S-129 M220-301 A13-S-136 M220-302 A13-S-136 M220-303 A13-S-147 M220-304 A13-S-147 M220-305 A13-S-147 M220-306 A13-S-130 M220-307 A13-S-142 M220-308 A13-S-142 M220-309 A13-S-164 M220-310 A13-S-154 M220-311 A13-S-166	A5290, A5302, A5313, A5324, A5335, A5345, A5366, A5376, A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5447 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5455 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5199 & 5212 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174
M220-291 A13-S-141 M220-292 A13-S-131 M220-293 A13-S-148 M220-294 A13-S-159 M220-295 A13-S-149 M220-296 A13-S-150 M220-297 A13-S-137 M220-298 A13-S-138 M220-299 A13-S-134 M220-300 A13-S-138 M220-301 A13-S-136 M220-302 A13-S-136 M220-303 A13-S-147 M220-304 A13-S-160 M220-305 A13-S-135 M220-306 A13-S-135 M220-307 A13-S-142 M220-308 A13-S-142 M220-309 A13-S-164 M220-310 A13-S-154 M220-311 A13-S-166 M220-312 A13-S-84	A5290, A5302, A5313, A5324, A5335, A5345, A5366, A5376, A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5447 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5435 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5345 AND A5366 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5199 & 5212 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174
M220-291 A13-S-141 M220-292 A13-S-131 M220-293 A13-S-148 M220-294 A13-S-159 M220-295 A13-S-149 M220-296 A13-S-150 M220-297 A13-S-137 M220-298 A13-S-138 M220-299 A13-S-134 M220-300 A13-S-129 M220-301 A13-S-136 M220-302 A13-S-136 M220-303 A13-S-147 M220-304 A13-S-147 M220-305 A13-S-147 M220-306 A13-S-135 M220-307 A13-S-142 M220-308 A13-S-142 M220-309 A13-S-144 M220-310 A13-S-154 M220-311 A13-S-166 M220-312 A13-S-84 M220-313 A13-S-88	A5290, A5302, A5313, A5324, A5335, A5345, A5366, A5376, A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5447 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5455 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5179 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174
M220-291 A13-S-141 M220-292 A13-S-131 M220-293 A13-S-148 M220-294 A13-S-159 M220-295 A13-S-149 M220-296 A13-S-150 M220-297 A13-S-137 M220-298 A13-S-138 M220-299 A13-S-134 M220-300 A13-S-129 M220-301 A13-S-136 M220-302 A13-S-136 M220-303 A13-S-147 M220-304 A13-S-160 M220-305 A13-S-135 M220-306 A13-S-135 M220-307 A13-S-142 M220-308 A13-S-142 M220-309 A13-S-164 M220-310 A13-S-164 M220-311 A13-S-166 M220-312 A13-S-84 M220-313 A13-S-88 M220-314 A13-S-93	A5290, A5302, A5313, A5324, A5335, A5345, A5366, A5376, A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5447 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5445 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5228 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5179 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174 AERIAL STRUCTURE BOX GIRDER SCHEDULE — CONSTANT WEB UNITS
M220-291 A13-S-141 M220-292 A13-S-131 M220-293 A13-S-148 M220-294 A13-S-159 M220-295 A13-S-149 M220-296 A13-S-150 M220-297 A13-S-137 M220-298 A13-S-138 M220-299 A13-S-134 M220-300 A13-S-138 M220-301 A13-S-136 M220-302 A13-S-136 M220-303 A13-S-147 M220-304 A13-S-160 M220-305 A13-S-135 M220-306 A13-S-135 M220-307 A13-S-142 M220-308 A13-S-142 M220-309 A13-S-164 M220-310 A13-S-164 M220-311 A13-S-166 M220-312 A13-S-84 M220-313 A13-S-88 M220-314 A13-S-88 M220-315 A13-S-80	A5290, A5302, A5313, A5324, A5335, A5345, A5366, A5376, A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5447 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A53566 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5199 & 5212 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5196 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5196 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174 AERIAL STRUCTURE BOX GIRDER SCHEDULE — CONSTANT WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE HORIZONTAL BOX GIRDER DEFINITION
M220-291 A13-S-141 M220-292 A13-S-131 M220-293 A13-S-148 M220-294 A13-S-159 M220-295 A13-S-149 M220-296 A13-S-150 M220-297 A13-S-137 M220-298 A13-S-138 M220-299 A13-S-134 M220-300 A13-S-138 M220-301 A13-S-136 M220-302 A13-S-136 M220-303 A13-S-147 M220-304 A13-S-135 M220-305 A13-S-135 M220-306 A13-S-130 M220-307 A13-S-142 M220-308 A13-S-143 M220-309 A13-S-164 M220-310 A13-S-154 M220-311 A13-S-166 M220-312 A13-S-84 M220-313 A13-S-88 M220-315 A13-S-80 M220-316 A13-S-120	A5290, A5302, A5313, A5324, A5335, A5345, A5366, A5376, A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5447 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A51799 & 5212 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174 AERIAL STRUCTURE BOX GIRDER SCHEDULE — CONSTANT WEB UNITS AERIAL STRUCTURE HORIZONTAL BOX GIRDER DEFINITION
M220-291 A13-S-141 M220-292 A13-S-131 M220-293 A13-S-148 M220-294 A13-S-159 M220-295 A13-S-149 M220-296 A13-S-150 M220-297 A13-S-137 M220-298 A13-S-138 M220-299 A13-S-134 M220-300 A13-S-138 M220-301 A13-S-136 M220-302 A13-S-136 M220-303 A13-S-147 M220-304 A13-S-160 M220-305 A13-S-135 M220-306 A13-S-135 M220-307 A13-S-142 M220-308 A13-S-142 M220-309 A13-S-164 M220-310 A13-S-164 M220-311 A13-S-166 M220-312 A13-S-84 M220-313 A13-S-88 M220-314 A13-S-88 M220-315 A13-S-80	A5290, A5302, A5313, A5324, A5335, A5345, A5366, A5376, A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5447 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5455 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A53366 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5199 & 5212 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5196 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174 AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE HORIZONTAL BOX GIRDER DEFINITION
M220-291 A13-S-141 M220-292 A13-S-131 M220-293 A13-S-148 M220-294 A13-S-159 M220-295 A13-S-149 M220-296 A13-S-150 M220-297 A13-S-137 M220-298 A13-S-138 M220-299 A13-S-134 M220-300 A13-S-136 M220-301 A13-S-136 M220-302 A13-S-136 M220-303 A13-S-147 M220-304 A13-S-135 M220-305 A13-S-130 M220-306 A13-S-130 M220-307 A13-S-142 M220-308 A13-S-142 M220-309 A13-S-164 M220-310 A13-S-154 M220-311 A13-S-166 M220-312 A13-S-84 M220-313 A13-S-88 M220-315 A13-S-80 M220-316 A13-S-120 M220-317 A13-S-120	A5290, A5302, A5313, A5324, A5335, A5345, A5366, A5376, A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5447 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5366 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5366 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174 AERIAL STRUCTURE BOX GIRDER SCHEDULE — CONSTANT WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE HORIZONTAL BOX GIRDER DEFINITION
M220-291 A13-S-141 M220-292 A13-S-131 M220-293 A13-S-148 M220-294 A13-S-159 M220-295 A13-S-149 M220-296 A13-S-130 M220-297 A13-S-137 M220-298 A13-S-138 M220-299 A13-S-134 M220-300 A13-S-138 M220-301 A13-S-136 M220-302 A13-S-136 M220-303 A13-S-147 M220-304 A13-S-135 M220-305 A13-S-130 M220-306 A13-S-130 M220-307 A13-S-142 M220-308 A13-S-142 M220-309 A13-S-164 M220-310 A13-S-154 M220-311 A13-S-166 M220-312 A13-S-88 M220-313 A13-S-80 M220-315 A13-S-120 M220-316 A13-S-120 M220-317 A13-S-120 M220-318 A13-S-105 M220-319 A13-S-105	A5290, A5302, A5513, A5324, A5335, A5345, A5366, A5376, A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5445 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5435 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5419 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5403 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5392 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5376 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5356 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5238 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5225 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5186 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5176 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174 AERIAL STRUCTURE PIER CAP DETAILS — PIER A5174 AERIAL STRUCTURE PIER CAP DETAILS AERIAL STRUCTURE BIER CAP DETAILS AERIAL STRUCTURE BIER CAP DETAILS AERIAL STRUCTURE BIER CAP DETAILS AERIAL STRUCTURE BOX GIRDER SCHEDULE — CONSTANT WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE HORIZONTAL BOX GIRDER DEFINITION AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — SURYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — SURYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SCHEDULE — VARYING WEB UNITS AERIAL STRUCTURE BOX GIRDER SON DECK SLAB SECTIONS AERIAL
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FINAL

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REFERENCE DRAWINGS REVISIONS 06-15 DATE DESIGNED CF NUMBER DESCRIPTION DATE BY DESCRIPTION 06-15 JP ADDED SHEET G003C 06-15 DATE DRAWN 06-15 DATE CHECKED JP 06-15 DATE APPROVED AA



APPROVED —

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

PROJECT MANAGER



RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR

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DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A STATE OF MARYLAND, LICENSE NO. 45732, EXPIRATION DATE 07-22-2016

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE

REFERENCE DRAWINGS REVISIONS 06-15 DATE DESIGNED CF NUMBER DESCRIPTION DATE BY DESCRIPTION 06-15 JP ADDED SHEET G003D 06-15 DATE DRAWN 06-15 DATE CHECKED JP 06-15 DATE APPROVED AA



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED -



PROJECT MANAGER

RED LINE REHAB.-FRIENDSHIP HEIGHTS TO GROSVENOR

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SCALE M1272-003D DRAWING NO. AS SHOWN G-003D

GENERAL STRUCTURAL NOTES

- A. WMATA "GENERAL PROVISIONS AND STANDARD SPECIFICATIONS FOR CONTRACT DRAWINGS."
- B. WMATA "DIRECTIVE DRAWINGS."
- A. WMATA "MANUAL_OF_DESIGN_CRITERIA FOR MAINTAINING AND CONTINUED OPERATION OF FACILITIES AND SYSTEMS, (MAY 2014." AM2
- B. ACI 318-99 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ALTERNATE DESIGN METHOD.

150 PSF

150 PSF

250 PSF

150 PLF

100 PLF

70 PSF

250 PSF

30 PSF

40 PSF

15 PSF

90 MPH

1.15

100 PLF FOR FREE EDGES

IN ACCORDANCE WITH ASCE 7-10

200 LBS. IN ANY DIRECTION OR 50 PLF

- C. AISC MANUAL OF STEEL CONSTRUCTION, 14TH EDITION.
- D. AMERICAN WELDING SOCIETY STANDARD D1.1.
- E. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
- F. INTERNATIONAL BUILDING CODE, 2012.
- A. DEAD LOADS
- CONCRETE 150 PCF STEEL
- SOILS 130 PCF (BUOYANT WEIGHT = 68 PCF) ROCK 170 PCF
- B. LIVE LOADS
- STATION PLATFORMS
- STAIRWAYS
- 150 PSF OR CONCENTRATED LOAD OF 300 LBS. ON STAIR TREAD
- MEZZANINE
- PASSAGEWAYS - EQUIPMENT AND SERVICE ROOMS
- HORIZONTAL LOAD AT TOP OF
- CONCRETE PARAPET - VERTICAL LOAD AT TOP OF
- CONCRETE PARAPET
- SAFETY WALKS
- AIR PRESSURE FROM RUNNING TRAINS ON
- SERVICE AREA WALLS, DOORS & HARDWARE
- GRATINGS AND HATCHES 4. DESIGN LOADINGS FOR ELEVATORS
- A. SURFACE ELEVATORS
- BASIC WIND LOAD
- CANOPY FRAME LIVE LOAD
- ELEVATOR PIT SLAB AS PER MEP AND ELEVATOR MANUFACTURER
- B. MEZZANINE TO PLATFORM ELEVATORS
- ENCLOSURE, GLAZED AREA
- ENCLOSURE, UNGLAZED AREA 5. WIND LOADS
- COMPONENTS AND CLADDING
- BASIC WIND VELOCITY
- IMPORTANCE FACTOR CATEGORY
- 6. CONCRETE
- A. ALL CONSTRUCTION JOINTS IN EXTERIOR WALLS SHALL BE BONDED JOINTS.
- B. ALL VERTICAL CONSTRUCTION JOINTS IN EXTERIOR WALLS AND SLABS SHALL BE KEYED
- C. ALL HORIZONTAL CONSTRUCTION JOINTS IN INTERIOR MEMBERS SHALL BE KEYED
- D. ALL VERTICAL CONSTRUCTION JOINTS IN INTERIOR MEMBERS SHALL BE KEYED.
- E. ADDITIONAL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS MAY BE ADDED ONLY WITH WRITTEN AUTHORIZATION OF THE ENGINEER. ENGINEER APPROVED ADDITIONAL CONSTRUCTION JOINTS SHALL NOT RESULT IN ADDITIONAL EXPENSE TO THE OWNER.
- F. ALL CONTRACTION JOINTS SHALL HAVE A BOND BREAKER APPLIED.
- G. PROVIDE 9" PVC DUMBBELL WATERSTOPS IN ALL EXTERIOR CONSTRUCTION AND CONTRACTION JOINTS. FOR JOINT DETAILS, SEE DWG. NO. ST-S-001
- H. CHAMFER ALL EXPOSED EDGES 3/4" X 3/4". CHAMFER REQUIRED UNLESS NOTED OTHERWISE IN DRAWINGS
- I. ALLOW 48 HOURS MINIMUM CURING TIME BETWEEN PLACEMENT OF ADJACENT CONCRETE POURS
- J. ALL CONDUITS IN THE FINAL LINER AND SLABS SHALL BE ROUTED ON THE DRY SIDE OF THE WATER STOPS.
- K. REINFORCED CONCRETE STRUCTURES SHALL BE DETAILED AND CONSTRUCTED IN ACCORDANCE WITH THE CURRENT "ACI STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318).
- L. SEE ARCHITECTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL EMBEDDED ITEMS SUCH AS SCREWS, ANCHORS, ELECTRICAL CONDUITS, OPENINGS, ETC. WHICH MAY INTERFERE WITH CONCRETE CONSTRUCTION.
- M. CONCRETE STRENGTH SHALL BE AS FOLLOWS:
 - WALLS, SLABS, SLABS ON GRADE, BEAMS AND COLUMNS f'c = 4,000 PSI
- PRECAST CONCRETE f'c = 5.000 PSI- ALL OTHER CAST-IN-PLACE CONCRETE f'c = 3.500 PSI

- 7. REINFORCING STEEL
 - A. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
 - B. CONCRETE COVER FOR REINFORCING SHALL BE AS FOLLOWS,
 - UNLESS NOTED OTHERWISE ON THE DRAWINGS:
 - UNFORMED CONCRETE BOTTOM BARS IN FOOTINGS AND SLABS ON EARTH, GRAVEL OR CRUSHED STONE......3"
 - EXTERIOR UNFORMED SURFACE OF WALLS.......3"
 - BEAMS, COLUMNS, SLABS AND WALLS EXPOSED TO GROUND OR WEATHER AFTER THE REMOVAL OF FORMS......2'
 - BEAMS, COLUMNS AND WALLS NOT EXPOSED TO GROUND OR WEATHER AFTER THE REMOVAL OF FORMS....... 1 1/2"
 - SLABS NOT EXPOSED TO GROUND OR WEATHER AFTER THE REMOVAL OF FORMS......3/4"
 - C. ALL SPLICES SHALL BE CLASS B TENSION LAPS UNLESS OTHERWISE NOTED ON THE PLANS.
 - D. ALL REINFORCEMENT SHALL BE MADE ELECTRICALLY CONTINUOUS. THIS INCLUDES INTERFACE WITH ADJACENT CONTRACTS; CHIP OUT EXISTING CONCRETE TO MAKE CONNECTION WHERE NECESSARY. UNLESS OTHERWISE SHOWN OR NOTED, ELECTRICALLY BONDED CIRCUMFERENTIAL CONTRACTION JOINTS ARE TO BE CONSTRUCTED AT A MAXIMUM INTERVAL OF 50'-0" MEASURED HORIZONTALLY. FOR DETAILS OF ELECTRICAL BONDING, SEE DWG. NO. ST-S-007 AND ST-S-021.
 - E. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315-99 "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES." THE CONTRACTOR SHALL SUBMIT DRAWINGS OF REINFORCING STEEL BEFORE PROCEEDING WITH FABRICATION.
- F. WELDED STEEL WIRE FABRIC SHALL CONFORM TO ASTM A185-06. THE FABRIC SHALL BE FURNISHED IN FLAT SHEETS.
- G. UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS, SPLICE AND EMBEDMENT LENGTHS FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH TABLE SHOWN BELOW:

REINFORCING SPLICE AND DEVELOPMENT LENGTHS (INCHES)									
	#3	#4	#5	#6	#7	#8	#9	#10	#11
Ld	12	14	17	26	41	53	68	86	106
TOP BAR Ld	14	18	22	36	46	60	77	97	120
Ls	14	18	22	33	53	69	88	112	138
TOP BAR Ls	17	23	29	47	60	78	100	127	156

Ld=DEVELOPMENT LENGTH

Ls=SPLICE LENGTH

NOTE: TOP BARS ARE DEFINED AS HAVING MORE THAN 12" OF FRESH CONCRETE CAST BELOW BAR

- 8. STRUCTURAL STEEL
- A. MATERIALS SHALL CONFORM TO THE FOLLOWING:
- W-SHAPES ASTM A572 GRADE 50
- SHAPES AND PLATES TUBES ASTM A500 GRADE B - STRUCTURAL BOLTS ASTM A325
 - ANCHOR BOLTS ASTM F1554 GRADE 55 ASTM F432
- B. THE CONTRACTOR SHALL SUBMIT ERECTION PLANS AND SHOP DETAILS BEFORE PROCEEDING WITH FABRICATION.
- C. MILL BOTTOM OF ALL COLUMNS AND FINISH TOP OF ALL BASE PLATES IN ACCORDANCE WITH AISC SPECIFICATIONS. BASE PLATES SHALL BE WELDED TO BOTTOM OF COLUMNS.
- D. 1/4" THICK LEVELING PLATES SHALL BE USED UNDER ALL BEAMS AND COLUMNS RESTING ON
- E. ALL SHOP CONNECTIONS SHALL BE WELDED WITH ELECTRODES AS SPECIFIED. ALL FIELD CONNECTIONS SHALL BE HIGH STRENGTH BOLTED JOINTS, TYPE ST, EXCEPT WHERE NOTED. BOLTS SHALL BE A325 AND CERTIFIED AS NOT TO BE COUNTERFEIT.
- F. ELECTRODES FOR WELDING CONNECTIONS SHALL BE AS FOLLOWS:
- SHIELDED METAL ARC F70XX
- G. CONNECTION DETAILS SHALL BE DESIGNED AND SUBMITTED ON SHOP DRAWINGS BY THE CONTRACTOR AND ACCOMPANIED BY COMPLETE STRUCTURAL CALCULATIONS PREPARED AND SIGNED AND SEALED BY AN ENGINEER, LICENSED IN THE STATE OF MARYLAND.
- 9. GENERAL REQUIREMENTS
- A. ELEVATIONS ARE TO BE ACTUAL FINISH ELEVATION.
- B. SHORING REQUIRED FOR THE STABILITY OF THE UNCOMPLETED STRUCTURE OR FOR INSTALLATION OR MODIFICATION OF STRUCTURAL MEMBERS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. ANY REQUIRED TEMPORARY STRUCTURES SHALL BE DESIGNED FOR THE LOADINGS SHOWN ON DWG. NO. ST-S-009.
- C. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLIFTS FOUND IN CONTRACT DOCUMENTS AND/OR FIELD CONDITIONS IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY THE ENGINEER WITH ALI FIELD DIMENSIONS REQUIRED TO CHECK DETAIL DRAWINGS. THE \pm MARKS SHOWN WITH DIMENSIONS AND STATIONS DO NOT INDICATE ANY DEGREE OF PRECISION. THESE \pm MARKS INDICATE DIMENSIONS AND STATIONS FROM EXISTING PLANS THAT MAY VARY AND DO REQUIRE FIELD VERIFICATION BY THE CONTRACTOR.
- D. CONTRACTOR SHALL COORDINATE ALL REQUIRED OPENINGS WITH MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL COORDINATE FINAL SIZE AND LOCATION OF ALL OPENINGS WITH THE ACTUAL EQUIPMENT SUPPLIED, PROJECT REQUIREMENTS, AND WITH FIELD CONDITIONS

SUBMITTED BY_

- E. THE ENGINEER PERMITS NO ALTERATIONS OR OPENINGS THROUGH BEAMS OR COLUMNS, UNLESS DETAILED ON STRUCTURAL PLANS.
- F. THE SIZES AND LOCATIONS OF EQUIPMENT PADS, PEDESTALS AND FLOOR AND SLAB OPENINGS ARE DEPENDENT ON THE ACTUAL EQUIPMENT FURNISHED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND VERIFY ALL SUCH ITEMS. NO DIMENSIONS INDICATED ON THESE DRAWINGS SHALL BE ALTERED WITHOUT THE ENGINEERS APPROVAL.
- G. THE STRUCTURES SHALL BE DESIGNED TO RESISTS DESIGN LOADS ONLY AS COMPLETED STRUCTURES, UNLESS NOTED OTHERWISE ON THE DRAWINGS. ANY PROPOSED APPLICATION OF CONSTRUCTION LOADS WHICH EXCEED THE DESIGN LOADS, OR ANY LOADS APPLIED TO A PARTIALLY COMPLETED STRUCTURE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR, ALL THE COST OF ANALYSIS, REDESIGN AND ANY ADDITIONAL CONSTRUCTION COSTS RESULTING FROM THE REDESIGN SHALL BE ACCOMPLISHED AT THE CONTRACTOR'S
- H. WHERE A SPECIFIC MODEL AND/OR MANUFACTURER OF AN ITEM ARE NAMED ON A DRAWING AND/OR IN THE SPECIFICATIONS, THE MODEL AND/OR MANUFACTURER ARE THE BASIS OF DESIGN. ITEMS BY OTHER MANUFACTURERS OF EQUAL DESIGN MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW AS APPROVED
- I. ALL PLAN DIMENSIONS ON THE DRAWINGS ARE MEASURED IN A TRUE HORIZONTAL PLANE UNLESS NOTED
- J. ALL VERTICAL DIMENSIONS SHALL BE MEASURED IN A TRUE VERTICAL PLANE FOR ALL STRUCTURES UNLESS NOTED OTHERWISE.
- K. COLUMNS, WALLS, DOORS, CONSTRUCTION JOINTS AND ELEVATORS WITHIN THE STATION AND THE SERVICE AREAS SHALL BE PLACED TRULY VERTICAL, UNLESS NOTED OTHERWISE.
- L. SUBMITTALS
- REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
- ALL FORMWORK, SHORING AND RESHORING SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER REGISTERED IN THE STATE OF MARYLAND. ALL SUBMISSIONS SHALL BEAR HIS SEAL AND SIGNATURE.
- ALL SHORING, SHEETING, AND DEWATERING SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR. SHEETING AND SHORING SHALL BE DESIGNED BY THE CONTRACTORS ENGINEER REGISTERED IN THE STATE OF MARYLAND. ALL SUBMITTALS SHALL BEAR HIS/HER SEAL AND SIGNATURE AND MUST ACCOUNT FOR THE CONSTRUCTION SEQUENCE, DRAINAGE AND WALL THICKNESS. SUPPORT OF EXCAVATION SYSTEM FOR SHAFT AND ARCH SHALL PROVIDE SUFFICIENT CLEARANCE FOR CONSTRUCTION EXCAVATION, DELIVERY OF EQUIPMENT AND MATERIALS, WORKER ACCESS AND CONSTRUCTION OF FINAL STRUCTURE.
- STEEL GRATING SHALL HAVE DEPTH AS SHOWN ON DRAWINGS. MANUFACTURER SHALL DESIGN GRATING FOR THE LOADS SPECIFIED IN SECTION "3 DESIGN LOADING". ALL GRATING SHALL BE GALVANIZED PER ASTM A123.
- CONTRACTOR SHALL FURNISH DIMENSIONED COORDINATED SHOP DRAWINGS AT ALL LEVELS SHOWING THE LOCATION OF ALL SLEEVES AND OPENINGS REQUIRED BY ALL TRADES ON ONE PLAN FOR EACH LEVEL. CONFLICTS BETWEEN TRADES WILL BE RESOLVED BY GENERAL CONTRACTOR BEFORE SUBMISSION TO THE ENGINEER
- REVIEW OF SHOP DRAWINGS DESIGNED BY CONTRACTORS ENGINEER'S SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT PARAMETERS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL NOTES.

 M. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT ALL EXISTING STRUCTURES, CURBS, STREETS,
- ETC., FROM DAMAGE BY CONSTRUCTION EQUIPMENT. THE CONTRACTOR SHALL NOT DISPOSE OF ANY LIQUIDS, SLURRY, SOILS OR CHEMICALS ON THE SITE EXCEPT AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL RESOURCES OR OTHER
- WHICH SHALL BE DESIGNED, FOR THE WEIGHTS OF THE MATERIALS INDICATED ON THE DRAWINGS AND FOR THE SUPERIMPOSED LOADS INDICATED IN THE DESIGN DATA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING ETC. O. ALL COSTS OF INVESTIGATION AND/OR REDESIGN, DUE TO CONTRACTOR MISLOCATION OF STRUCTURAL

N. THESE CONCEPT STRUCTURAL DRAWINGS REPRESENT THE GENERAL REQUIREMENTS FOR THE PROJECT

- ELEMENTS OR OTHER LACK OF CONFORMANCE WITH THE PROJECT DOCUMENTS SHALL BE AT THE
- P. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR DETAILED INFORMATION REGARDING FINISHES, Q. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, DETAILS AND SPECIFICATIONS, THE MOST RIGID
- REQUIREMENTS SHALL GOVERN . BACKFILL PLACED AROUND SHAFT STRUCTURE SHALL BE SELECT MATERIAL
- A. REFERENCE GEOTECHNICAL DATA REPORT FOR SOUTH ENTRANCE TO BETHESDA METRO STATION BY E2CR, INC. DATED FEBRUARY 2010 FOR INFORMATION B. LOCATE ANY EXISTNG UTILITY LINES OR APPURTENANCES AND ADVISE ENGINEER OF ANY
- CONFLICTS OR DISCREPANCIES SHOWN IN PLANS PRIOR TO CONSTRUCTION. DO NOT DEMOLISH ANY EXISTING STRUCTURES WITHOUT WRITTEN AUTHORIZATION.
- C. ALL EXCAVATIONS SHALL BE KEPT DRY. STANDING WATER SHALL NOT BE ALLOWED IN EXCAVATIONS
- 11. EXISTING GEOTECHNICAL INFORMATION

10. EXCAVATION AND EARTHWORK

A. FOR EXISTING BORING INFORMATION AT BETHESDA STATION, REFER TO RECORD DRAWINGS OF ROCKVILLE ROUTE DATED MAY 1977. FOR ROCK CAPACITY, REFER TO FINAL SUBSURFACE INVESTIGATION PREPARED BY MUESER RUTLEDGE WENTWORTH & JOHNSON DATED MARCH 1972

AS DIRECTED BY WMATA, ALL STRUCTURAL DRAWINGS IN THIS PACKAGE HAVE BEEN ANNOTATED BY GANNETT FLEMING PARSONS JOINT VENTURE WITH MODIFICATION. ALL MODIFICATIONS ARE HIGHLIGHTED WITH CLOUDS.

NOTE: DIMENSIONS SHOWN ARE APPROXIMATE AND BASED ON INITIAL COORDINATION WITH WMATA. FINAL DIMENSIONS SHALL BE COORDINATED WITH WMATA AND EQUIPMENT SUPPLIED. FOR MINIMUM DIMENSIONS, SEE TECHNICAL PROVISIONS.

XXXXXX

REVISIONS DESIGNED DATE BY DESCRIPTION 6/19/15 IA CHANGED NOTES - AM2 DRAWN <u>E.M. THOMPSON</u> CHECKED D.S. TUSING PPROVED





WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF OPERATIONS SERVICES OFFICE OF ENGINEERING SERVICE

RKSK ummel, Klepper & Kahl, LLP

MOSHER STREET | BALTIMORE, MD 21217

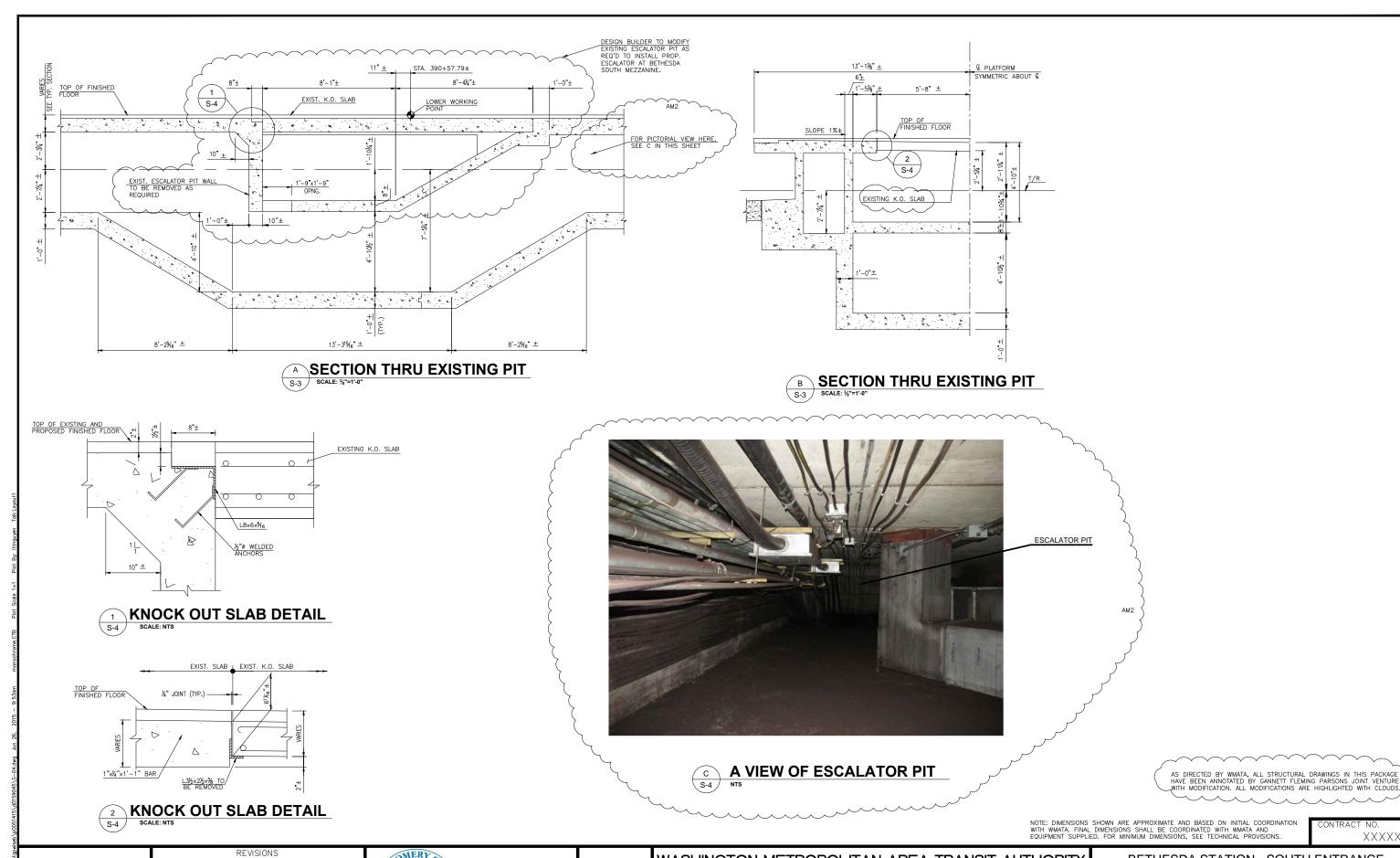
E (140) 728-2900 | FAX: (140) 728-2900 | FAX:

APPROVED.

STRUCTURAL GENERAL NOTES

BETHESDA STATION - SOUTH ENTRANCE

AS NOTED



DESCRIPTION 06/26/15 IA PICTURE ADDED - AM2

DESIGNED

DRAWN E.M. THOMPSON

CHECKED D.S. TUSING





WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

APPROVED_

DEPARTMENT OF OPERATIONS SERVICES OFFICE OF ENGINEERING SERVICE

SUBMITTED BY_

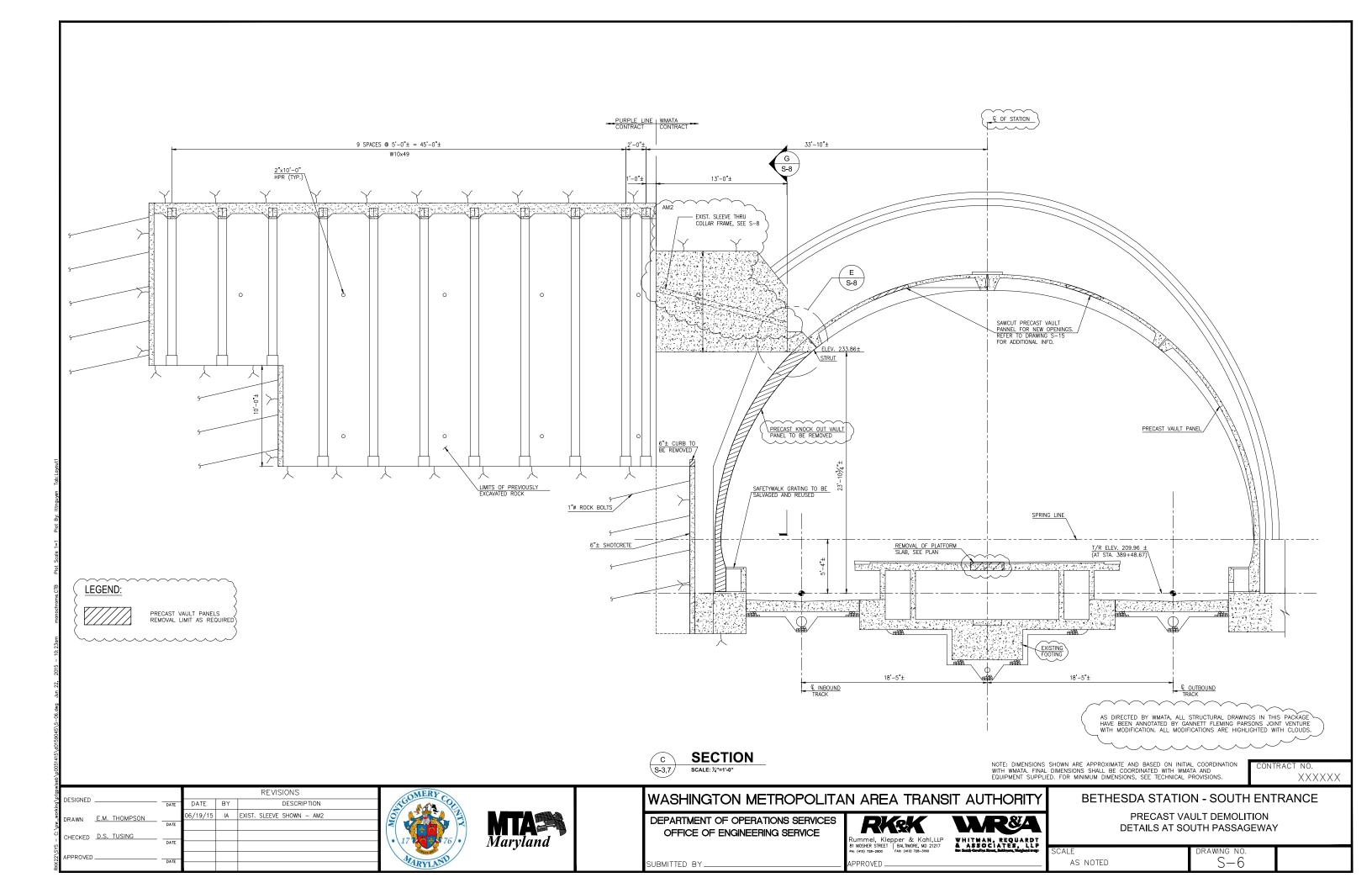
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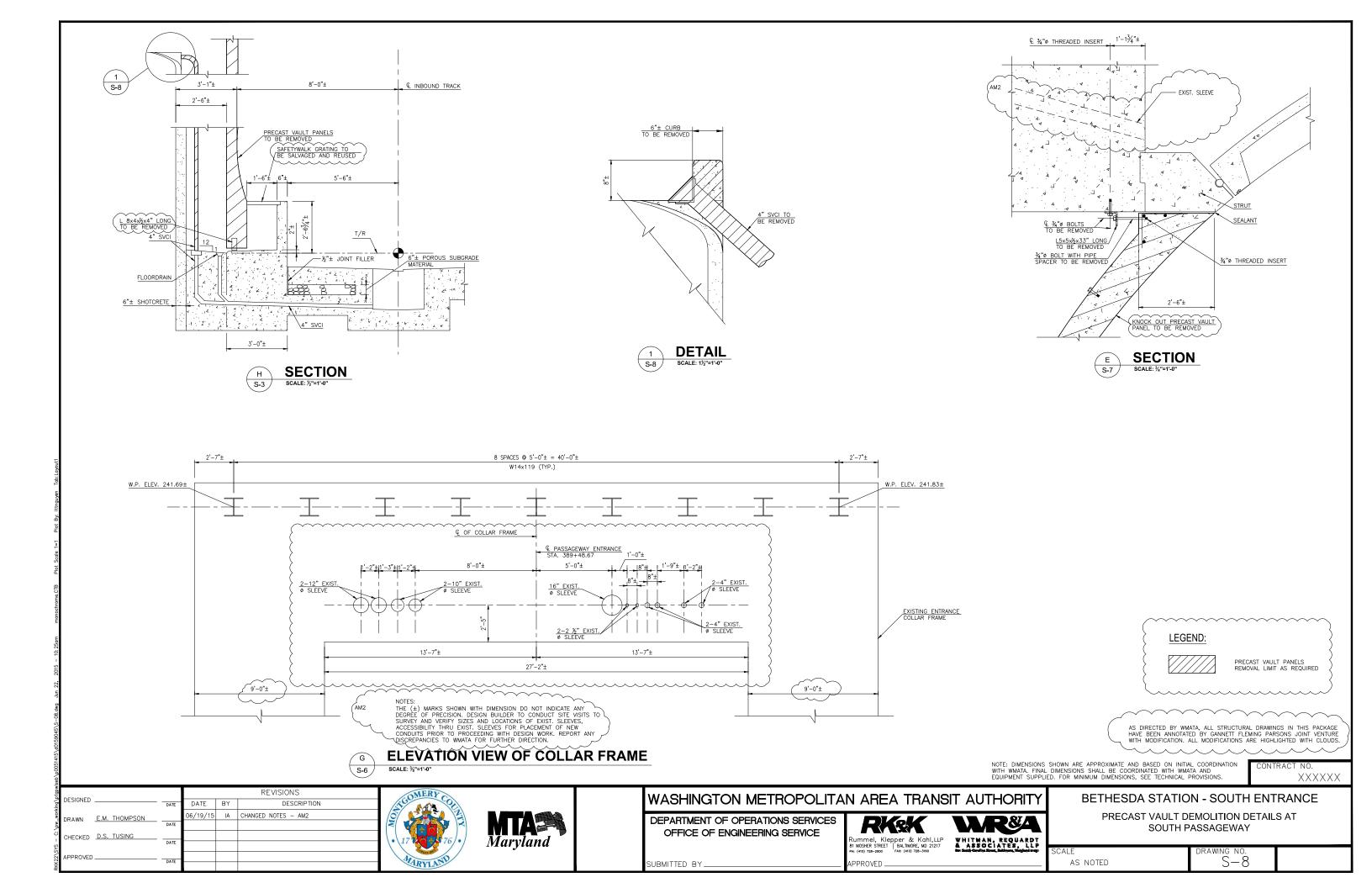
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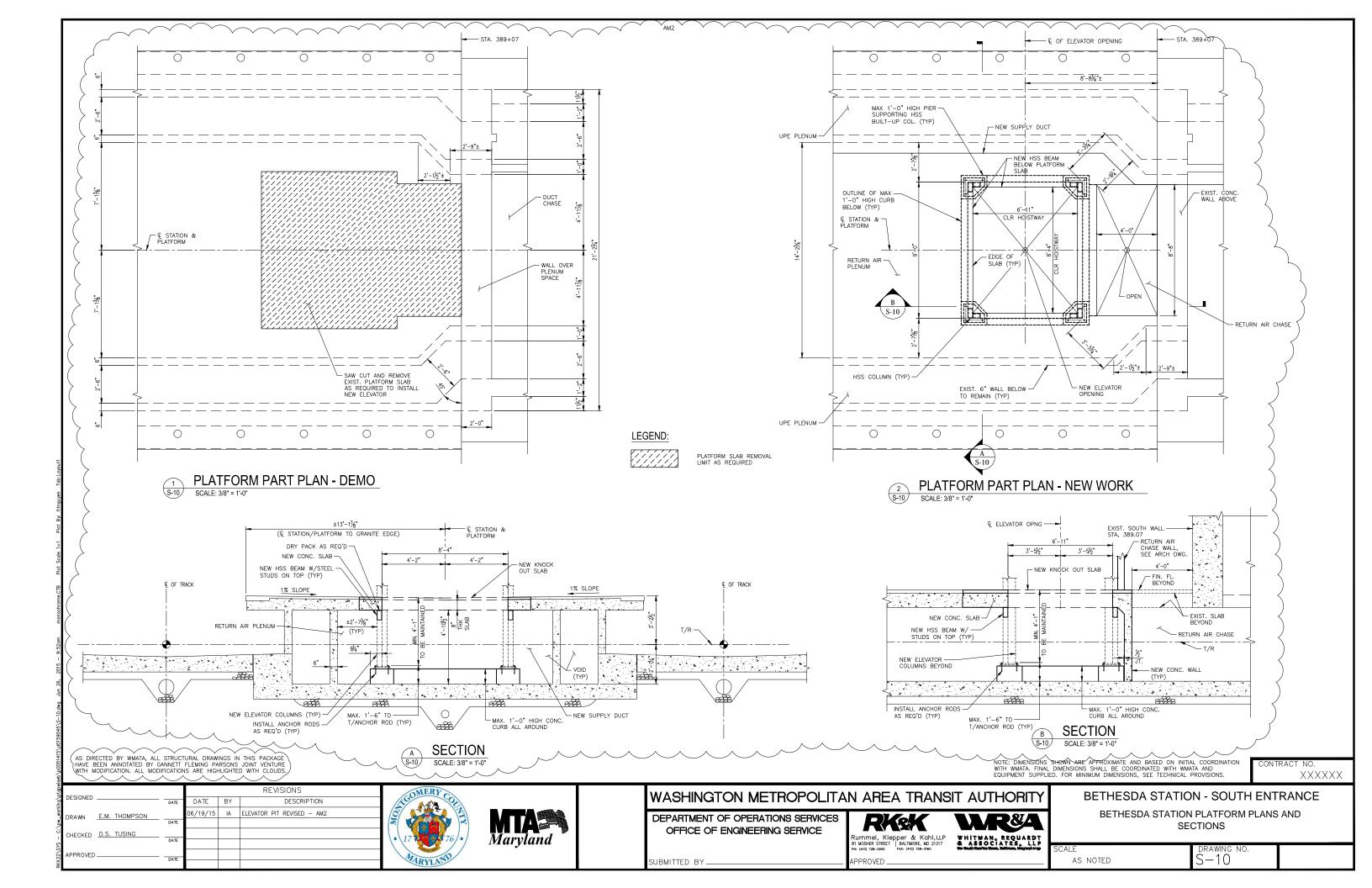
BETHESDA STATION - SOUTH ENTRANCE BETHESDA STATION PLATFORM DEMOLITION PLAN AND SECTIONS STA. 391+07 TO STA. 389+07

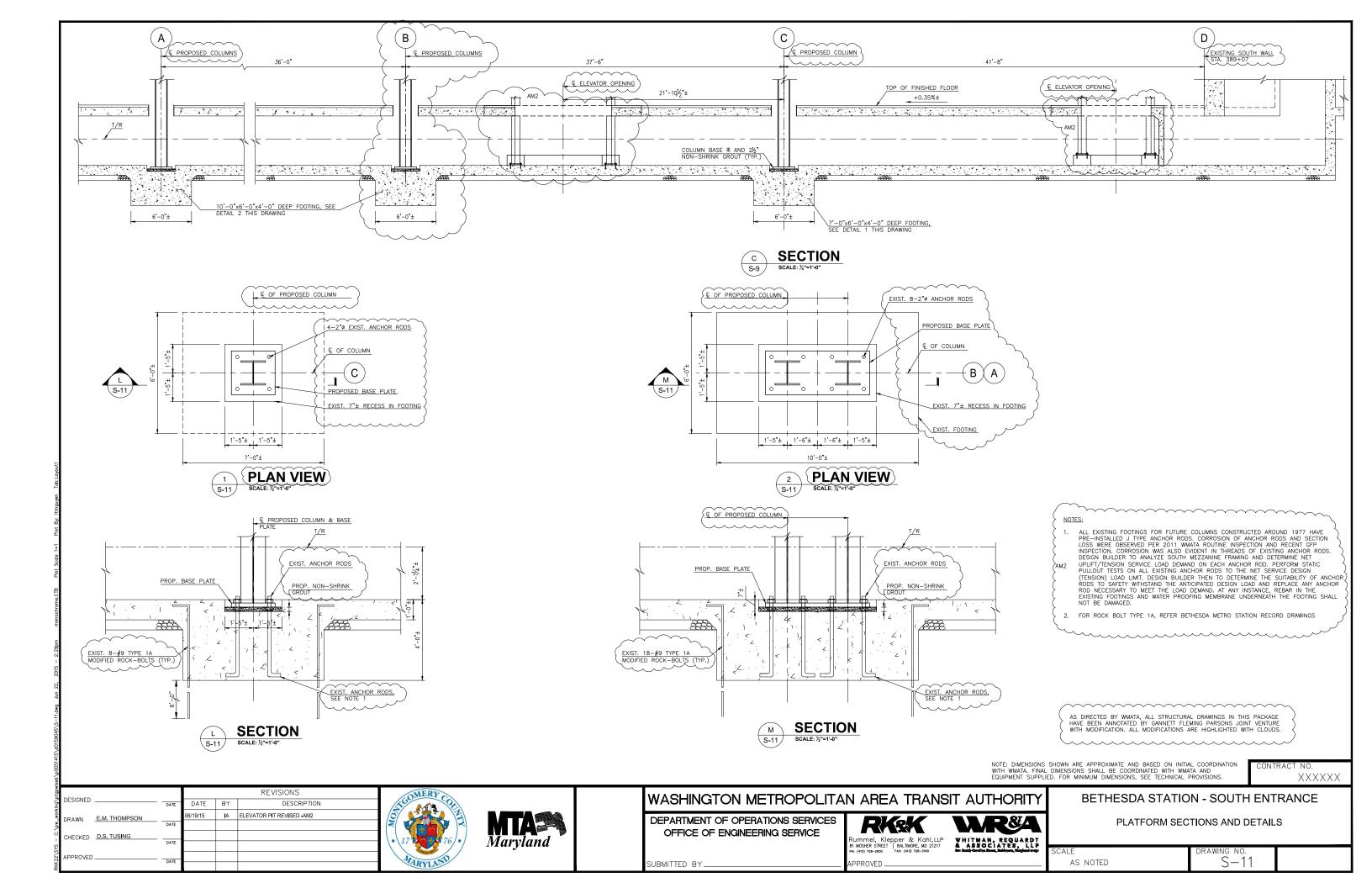
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S-4AS NOTED









TUNNEL REHABILITATION LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	MANUFACTURER & MODEL	NOTES
L	INDUSTRIAL LINEAR LED 48" LONG, 50W, 120/277V, REMOTE DRIVER, RATED IP66, COLD TEMP. RATED, (-30°C TO 50°C)	WALL	OSRAM-SYLVANIA ILL-L-50-7-45-LB-UNV-GR OR APPROVED EQUAL.	-
ETS BLUE LIGHT	LED WARNING LIGHT	WALL	FEDERAL SIGNAL 191 XLM-277-B 36 WATTS	PROVIDE STEADY-BURN (NON-FLASHING) MODEL

REFERENCE DRAWINGS

A08 - TBS - FRIENDSHIP HEIGHTS A9b-E-12 SSI6-E-21

A08 - TPSS - OLIVER STREET

A9h-F-8 FA10-E-7

A09 - TBS - NORWOOD DRIVE FA10-F-4

SSI6-E-31

A09 - TPSS - BETHESDA FA11-E-32

SSI6-E-34

SSI6-E-35

A10 - TBS - MEDICAL CENTER

SSI6-E-41

A10 - TPSS - MEDICAL CENTER

A11c-E-35 SSI6-E-44

SSI6-E-45

A10 - TBS - LOCUST HILL

A-11a-F-18

FA12-F-9 SSI6-E-51

A11 - TPSS - POOKS HILL

FA12-E-5

SSI6-E-54 SSI6-E-55

A11 - TBS - MONTROSE AVE

A13-E-41 A13-E-44 SSI6-E-61

GENERAL NOTES

- SCOPE OF WORK: REFER TO SPECIFICATIONS SECTION 01000 FOR ETAILED SCOPE OF WORK. SPECIFICATION SECTIONS 01000 AND ALL DIVISION 16000 SPECIFICATIONS ARE HEREBY MADE AN INTEGRAL PART OF THESE CONSTRUCTION DOCUMENTS.
- 2 CONTRACTOR SHALL CONTACT WMATA AR (AUTHORITY REPRESENTATIVE) TO DEFINE ACCEPTABLE WORKING HOURS. SPACE FOR STORAGE OF MATERIALS, PARKING, ETC.
- 3. ALL MATERIALS PROVIDED SHALL BE UL LISTED, NEW AND CONFORM TO CONTRACT SPECIFICATIONS, DRAWINGS AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- 4. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF ALL LOCAL CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION
- THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL CONTRACT DRAWINGS/SPECIFICATIONS AND BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIALS AND EQUIPMENT AT EACH LOCATION AS INDICATED. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND RECAUSE OF THE SMALL SCALE OF THE DRAWINGS IT IS NOT POSSIBLE TO INDICATE ALL PULL BOXES. OFFSETS, FITTINGS AND ACCESSORIES AS MAY BE REQUIRED. FURNISHING SUCH MATERIALS AS REQUIRED TO MEET FIELD CONDITIONS AND NEC REQUIREMENTS SHALL BE AT NO ADDITIONAL COST TO THE AUTHORITY.
- 6 THE CONTRACTOR SHALL EXAMINE THE SITE AND OBSERVE THE CONDITIONS LINDER WHICH THE WORK SHALL BE DONE OR OTHER CIRCUMSTANCES WHICH WILL AFFECT THE CONTEMPLATED WORK PRIOR TO SUBMITTING A BID. ANY REQUESTED VARIANCE TO THESE CONTRACT DOCUMENTS SHALL BE SUBMITTED AS PART OF THE BID. ANY VARIANCE REQUIRED FOR FIELD CONDITIONS IDENTIFIED AFTER THE BID PERIOD WILL BE RESPONSIBILITY OF CONTRACTOR
- EXISTING TUNNEL LIGHTING IS SUPPLIED FROM ALTERNATE PHASES OF A 3-CIRCUIT HOMERUN. REPLACEMENT WIRING SHALL FOLLOW THE SAME PATTERN
- 8. INDICATED DIMENSIONS OF EQUIPMENT ARE APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE FINAL VERIFICATION OF ALL MEASUREMENTS SO THAT THE NEW EQUIPMENT CAN BE MANUFACTURED TO RETROFIT EXISTING
- 9. THE CONTRACTOR SHALL ONLY WORK ON DE-ENERGIZED EQUIPMENT. ALL OUTAGES SHALL BE COORDINATED WITH WMATA
- 10 CONTRACTOR SHALL TAKE PROPER ACTION TO SECURE AND PROTECT THE OPERATIONAL EQUIPMENT IN THE STATION OR FACILITY DURING CONTRACTOR'S WORK, TO PREVENT DAMAGE OR SHUT DOWN OF EQUIPMENT
- 11. CONTRACTOR SHALL PROTECT EXISTING ELECTRICAL EQUIPMENT TO REMAIN FROM DUST AND WATER DURING CONTRACTOR'S
- 12. ALL NEW EQUIPMENT TO BE INSTALLED SHALL BE STORED PROPERLY. EQUIPMENT DAMAGED DURING SHIPPING, HANDLING, STORAGE, WATER OR OTHER CAUSES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
- 13 CONTRACTOR SHALL TEMPORARILY STORE THE EXISTING REMOVED EQUIPMENT UNTIL ITS DISPOSAL. A STAGING AREA INSIDE THE FACILITY SHALL BE ESTABLISHED TO AVOID OBSTRUCTION TO EXISTING ELECTRICAL EQUIPMENT WITH LOCATION APPROVED BY WMATA AR. COORDINATE WITH AR TO DETERMINE WHETHER EQUIPMENT SHOULD BE RETURNED TO WMATA OR DISPOSED OF BY CONTRACTOR.
- 14. INTERRUPTION OF SERVICE TO EQUIPMENT SHALL BE KEPT TO A MINIMUM. SHOULD OCCUR ONLY IN METRO NON-REVENUE HOURS AND SHALL BE COORDINATED WITH WMATA AR AT LEAST TWO WEEKS PRIOR TO THE REQUIRED OUTAGE.

- 15. CONTRACTOR SHALL OBTAIN & BECOME FAMILIAR WITH WMATA'S SAFETY AND OPERATING PROCEDURES & RULES SAFETY TRAINING & CERTIFICATION FOR ALL CONTRACTOR EMPLOYEES ON THE WORK SITE IS MANDATORY
- 16. A CLEAR AND UNOBSTRUCTED PATHWAY FROM TRACK TO STREET SHALL BE MAINTAINED AT ALL TIMES FOR PERSONNEL ACCESS. THIS INCLUDES PROHIBITING SUCH ACTIVITIES AS BLOCKING DOORWAYS, PATHWAYS OR STAIRS WITH EQUIPMENT AND MATERIALS, DISMANTLING STAIRS AND OBSTRUCTING STREET HATCHWAYS.

17. NOT USED. AM2

- ALL TUNNEL RECEPTACLE BRANCH CIRCUIT WIRING SHALL BE 2/ C #10 + 1 # 10G MULTICONDUCTOR CABLE.
- 19. ALL NEW POWER WIRES SHALL BE WITH RHW-2 INSULATION LOW SMOKE, ZERO HALOGEN. ALL NEW CONDUITS - GRS TYPE. ALL MATERIALS AND INSTALLATION SHALL COMPLY WITH
- 20. MAINTAIN CONTINUITY OF THE SERVICE OF ALL CONTROL AND COMMUNICATION WIRING. WHERE SUCH WIRING IS TO BE REPLACED PROVIDE TEMPORARY WIRING TO ENSURE UNINTERRUPTED SERVICE, MINIMIZE ANY REQUIRED DOWNTIME AND COORDINATE TIME AND DURATION OF DOWNTIME WITH WMATA AR
- 21. ALL MOUNTING HARDWARE INCLUDING CLAMPS, NUTS, BOLTS, SUPPORTS, ETC SHALL BE 316 STAINLESS STEEL. PROVIDE SAMPLES OF FOR WMATA'S APPROVAL BEFORE PURCHASING
- 22. WHERE TESTING OF EXISTING ALS CABLES FOR ETS STATIONS IS CALLED FOR, TESTING OF WIRING SHALL INCLUDE CONTINUITY AND INSULATION RESISTANCE TESTING ACCORDING TO NETA STANDARDS. PROVIDE TEST REPORTS TO WMATA AR. TESTING SHALL INCLUDE VISUAL INSPECTION FOR SIGNS OF DETERIORATION.
- 23. EXISTING CABLE SUPPORTS ARE INSTALLED ON CHANNEL INSERTS EMBEDDED IN TUNNEL CONCRETE WALLS. THEY ARE LOCATED 4'-0" APART. CABLE SUPPORTS CLAMPS OR STRAPS SHALL BE REPLACED ON EVERY CHANNEL INSERT LOCATED IN HEAVY OR VERY HEAVY CALCIFICATION AREAS, AND WHERE FOUND TO BE CORRODED OR BROKEN. WHERE EXISTING EMBEDDED UNISTRUTS ARE CORRODED AND/OR DETERIORATED SUCH THAT THEY CANNOT SUPPORT CABLES. PROVIDE NEW 316 STAINLESS UNISTRUT AND INSTALL IT OVER THE EXISTING EMBEDDED UNISTRUTS. REFER TO STRUCTURAL DRAWINGS FOR INSTALLATION DETAIL
- 24. TUNNEL LIGHT FIXTURE REPLACEMENT SHALL BE PHASED SUCH THAT EXISTING POWER SUPPLY ELECTRICAL PANELS ARE NOT OVERLOADED. THE FOLLOWING IS A POSSIBLE WORKING SEQUENCE FOR EACH LIGHTING FEEDER CONSISTING OF 3
- INSTALL NEW TUNNEL FIXTURES NEAR EXISTING FIXTURES.
- INSTALL NEW LIGHTING POWER SUPPLY CABLE FROM DESIGNATED PANEL TO FIXTURES. TERMINATE WIRING AT LOAD END ONLY.
- DISCONNECT EXISTING POWER SUPPLY CABLE FROM SOURCE.
- CONNECT NEW POWER SUPPLY CABLE TO SOURCE.
- 25 MAINTAIN A MINIMUM ILLUMINATION LEVEL IN THE TUNNELS OF 0.5 FC AT ALL TIMES. PROVIDE TEMPORARY LIGHTING AS
- 26. REFER TO "TYPICAL SCHEMATIC DIAGRAM FOR LOAD CENTERS AND RECEPTACLES" ON DWG. T-E-500 FOR RECEPTACLE CIRCUITING.
- 27. ELECTRICAL PANEL LOCATIONS: REFER TO THE FOLLOWING "ELECTRICAL MAINTENANCE MAPS" DRAWINGS FOR LOCATION OF ELECTRICAL PANELS: MM - A - E21 FRIENDSHIP HEIGHTS STATION MM - A - E22 FRIENDSHIP HEIGHTS STATION MM - A - E24 BETHESDA STATION MM - A - E26 MEDICAL CENTER STATION MM - A - E29 GROSVENOR STATION USE EXISTING CONDUIT SLEEVES CONNECTING ELECTRICAL ROOMS TO TUNNELS. FOR BID PURPOSES, ASSUME

NOT TO SCALE

A DISTANCE OF 100 FT FOR THE HOME RUN LENGTH

28. FOR INSTALLATION DETAILS SEE DWGS T-E-500 & T-E-501.

- 29. SEE REFERENCE DRAWINGS FOR LOCATIONS OF TPSS's AND TBS's.
- 30. WHEREVER ON THE DRAWINGS THE TERM "CABLE SUPPORT" IS USED IT SHALL BE UNDERSTOOD TO MEAN THE SAME AS "CABLE CLAMP '
- 31. ALL REMOVED AND REPLACED EQUIPMENT, FIXTURES, CABLES, WIRING, CONDUIT, AND JUNCTION BOXES SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSE OF IN A LEGAL MANNER. AM2

FQ15093

RED LINE REHAB.-FRIENDSHIP HEIGHTS TO

GROSVENOR - PART 1

GENERAL NOTES

T-E-001

M1272-052

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 43224, EXPIRATION DATE 04-14-2015.

APPROVED

REFERENCE DRAWINGS REVISIONS DESIGNED K. IBRAHIM 01/30/ 06/15 K.I. REVISED NOTES AM2 01/30/ CHECKED A FISHEL 01/30/ DATE APPROVED J. PURDY



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

JOINT VENTURE

PROJECT MANAGER