DDP APPENDIX C

DRAWINGS

C0.01 Site Constraints Plan
C1.00 Existing Conditions Plan
C2.00 Site Plan
C4.00 Utility Composite Plan
C5.00 Stormwater Management Plan
C5.30 Existing Drainage Area Map
C5.31 Proposed Drainage Area Map
C6.00 Erosion and Sediment Control Plan Ph 1
C6.02 Erosion and Sediment Controls Details
DA200 Water Plan and Profile
DA201 Water Details and Notes
DA300 Sanitary Plan
DA310 Partial Exelon Garage Sanitary Piping Demolition Plan
DA311 Partial Exelon Garage Sanitary Piping Plan
DA312 Sanitary Details
DA313 Sanitary Details
DA400 Storm Drain Plan
DA501 Conduit Plan

A1.01 Level 1 Floor Plan (+14’-0”)
A1.02 Level 2 Floor Plan (+28’-0”)

S1.01N Foundation Plan – North
S1.01S Foundation Plan – South
S2.00 Typical Foundation Details
S2.01 Typical Foundation Details
S4.01 Pile Cap Plans
S4.02 Pile Cap Plans
S4.03 Pile Cap Plans

EN1.01 Environmental Controls Plan
EN1.02 Environmental Controls Details

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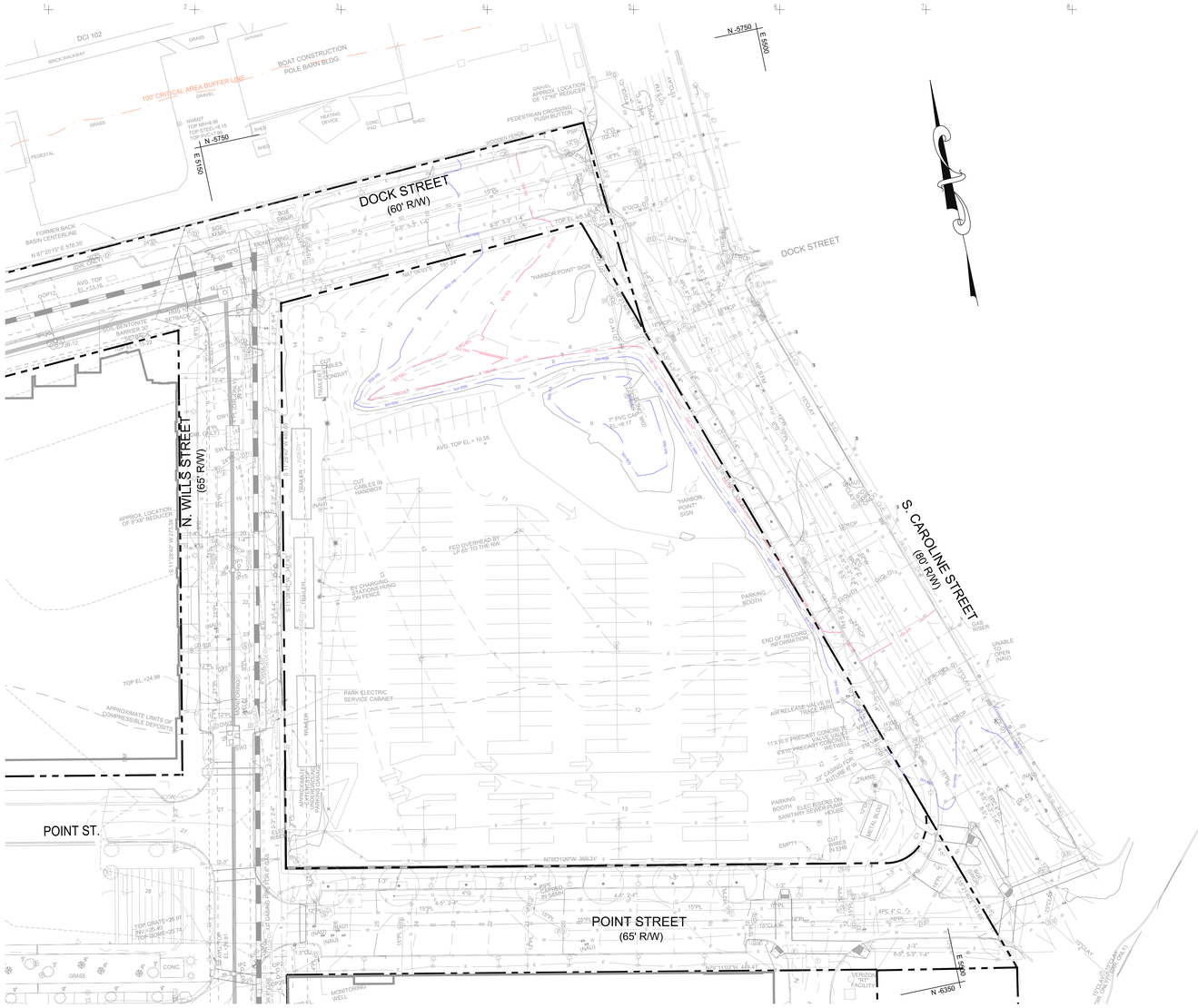

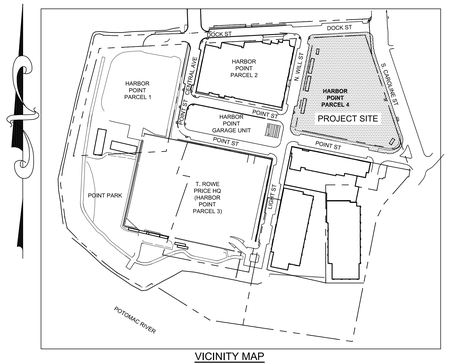

VICINITY MAP
SCALE: 1" = 200'

200 100 0 200 400

SCALE: 1" = 200'

GENERAL NOTES

1. TOPOGRAPHIC INFORMATION SHOWN HEREON, WAS OBTAINED FROM SURVEYS PERFORMED BY MCLAREN ENGINEERING GROUP IN JANUARY 2020. THERE IS NO WARRANTY OR GUARANTEE ON THE COMPLETENESS OR CORRECTNESS OF THE EXISTING CONDITION INFORMATION. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER PRIOR TO THE START OF ANY WORK.
2. COORDINATES AND ELEVATIONS ARE REFERRED TO THE BALTIMORE CITY SURVEY CONTROL SYSTEM AND TIED TO THE FOLLOWING TRAVERSE STATIONS PROVIDED BY MCLAREN ENGINEERING GROUP:

   GSW3 S 5813.2834 E 5134.9458 ELEV 15.06
   102 S 5873.1359 E 5458.4962 ELEV 4.68
3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH BALTIMORE CITY STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED.
4. THE ZONING FOR THIS AREA IS C-5-DE (DOWNTOWN EAST SUBDISTRICT) BASED UPON CITY COUNCIL ORDINANCE. AN APPROVED PUD EXISTS FOR THIS DEVELOPMENT AREA.
5. THE SITE IS WITHIN A THE CHESAPEAKE BAY CRITICAL AREA.
6. PROJECT ADDRESS:
   1402 POINT STREET
   BALTIMORE, MARYLAND 21231
   WARD 03, SECTION 07, BLOCK 1815, LOT 004
7. RCRA CORRECTIVE ACTION PERMITTEE:
   HONEYWELL INTERNATIONAL
8. OWNER / APPLICANT:
   HARBOR POINT PARCEL 4 HOLDINGS, LLC
   1300 THAMES ST., SUITE 10
   BALTIMORE, MARYLAND 21231
   (410) 332-1100

Natural Resources Inventory

Federal Regulated			State Regulated			Local Regulated		
Present? (Y/N)	Feature	Legend Symbology	Present? (Y/N)	Feature	Legend Symbology	Present? (Y/N)	Feature	Legend Symbology
N	Wetlands	N/A	N	Tidal and Nontidal Wetlands	N/A	N	Steep Slopes	N/A
N	Major Waterways	N/A	N	Wetlands of Special State Concern	N/A	N	Highly Erodible Soils	N/A
N	Floodplains	See Legend	N	Wetland Buffers	N/A	N	Enhanced Stream Buffers	N/A
			N	Stream Buffers	N/A	Y	Topography / Slopes	See Legend
			N	Perennial Streams	N/A	N	Springs	N/A
			N	Floodplains	See Legend	N	Seeps	N/A
			N	Forests	N/A	N	Intermittent Streams	N/A
			N	Forest Buffers	N/A	Y	Vegetative Cover	See Legend
			N	Critical Areas	See Legend	Y	Soils	See Table
						N	Bedrock/Geology	N/A
						N	Existing Drainage Area	N/A
						N	Existing SWM Facilities	Y

Updated 3/1/2016

Soils Data Table

Symbol	Soil Series	Slope	Hydric	Highly Erodible? (K)	Hydrologic Classification
44UC	Urban land	0-15%	No	N/A	D

FLOODPLAIN ELEVATION WORKSHEET*

FEMA MAP

- MAP NUMBER 2400870025F, APRIL 2, 2014
- ZONE AE (100 YR, 1%) EL. 7 ALONG SHORELINE
- ZONE X (500 YR, 0.2%), NO ELEVATION PROVIDED,
- OUTSIDE OF MODERATE WAVE ACTION ZONE (LIMIT OF TIDAL FLOODING)
- VERTICAL DATUM NAVD88

FEMA FLOOD INSURANCE STUDY 240087V000B

- CITY OF BALTIMORE, APRIL 2, 2014
- NEAREST TRANSECT: 9
- 100 YR STORM EL.: 5.2
- 500 YR STORM EL.: 7.4
- NAVD88

FLOOD PROTECTION ELEVATION (NAVD88):

- FLOOD AREA: NON-TIDAL
- DESIGN FLOOD: 500 YR
- DESIGN FLOOD ELEVATION (DFE): 7.4 NAVD88
- FREEBOARD: 2 FT
- FLOOD PROTECTION ELEVATION (FPE) : DFE + 2' = 9.4 NAVD88

PROJECT FLOOD PROTECTION ELEVATION:

- BCVD CONVERSION: NAVD88 + 1.7'** = BCVD
- DFE CONVERSION (500 YR STORM EL.). 7.4 NAVD88 + 1.7' = 9.1 BCVD
- PROJECT FLOOD PROTECTION ELEVATION: 9.4 + 1.7 = 11.1 BCVD

* THIS WORKSHEET COMPLIES WITH BALTIMORE CITY'S 2021 UPDATE TO NATURAL RESOURCES ARTICLE 7.

** ALTHOUGH THE CONVERSION RATE FROM NAVD88 TO BCVD IS LOCATION SPECIFIC, BCDOP REQUIRES A CONVERSION RATE OF +1.7' BE APPLIED FOR FLOODPLAIN APPLICATIONS

EXISTING LEGEND

- WATER VALVE
- ELECTRIC MANHOLE
- GAS VALVE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- FIRE HYDRANT
- SIGN
- CLEANOUT
- LIGHT
- ELECTRIC HANDBOX
- BUSH
- EVERGREEN TREE
- STORM DRAIN INLET
- TREE
- DIRECTION ONLY
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE
- FENCE
- PLANTER
- GAS LINE
- COMMUNICATION LINE
- ELECTRIC LINE
- WATER LINE
- STORM DRAIN LINE
- SANITARY SEWER LINE
- GEOMEMBRANE CONTOUR
- HMS PIEZOMETERS*
- HEAD MAINTENANCE SYSTEM LINING*
- HMS SETBACK (10 FT)*
- SOIL BENTONITE BARRIER WALL SETBACK LINES (20 FT AND 30 FT)
- EXISTING FOUNDATION STRUCTURES*
- SOIL BENTONITE BARRIER WALL*
- APPROXIMATE LIMITS OF COMPRESSIBLE DEPOSITS*
- 100' CRITICAL AREA BUFFER LIMIT*
- 100-YEAR FLOODPLAIN*
- 500-YEAR FLOODPLAIN*
- PROPERTY LINE

* NOT PART OF MCLAREN SURVEY. INFORMATION GATHERED FROM RECORD DRAWINGS.

30 15 0 30 60

SCALE: 1" = 30'

DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

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GEO-TECHNOLOGY ASSOCIATES
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BALTIMORE, MARYLAND 21230
(443) 286-6562

key

project

PARCEL 4 APARTMENT AND GARAGE

1402 POINT STREET
BALTIMORE, MD 21231

seal

issued	date	description
	03/17/2021	SPRC
	05/25/2021	Schematic Design
	06/02/2021	SPRC Submission 2
	06/04/2021	ESD #8077 SWM Concept
	08/02/2021	Permit Set
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	09/29/2021	DDP Permit Set
	10/06/2021	Floodplain Submission
	10/11/2021	ESD #8077 SWM Concept
	11/01/2021	Check Set

title

EXISTING CONDITIONS PLAN

drawn by:	JPS/ZWB
checked by:	RAF/CDK
scale:	AS SHOWN
project number:	20339.000
	scaled inch

sheet number

C1.00

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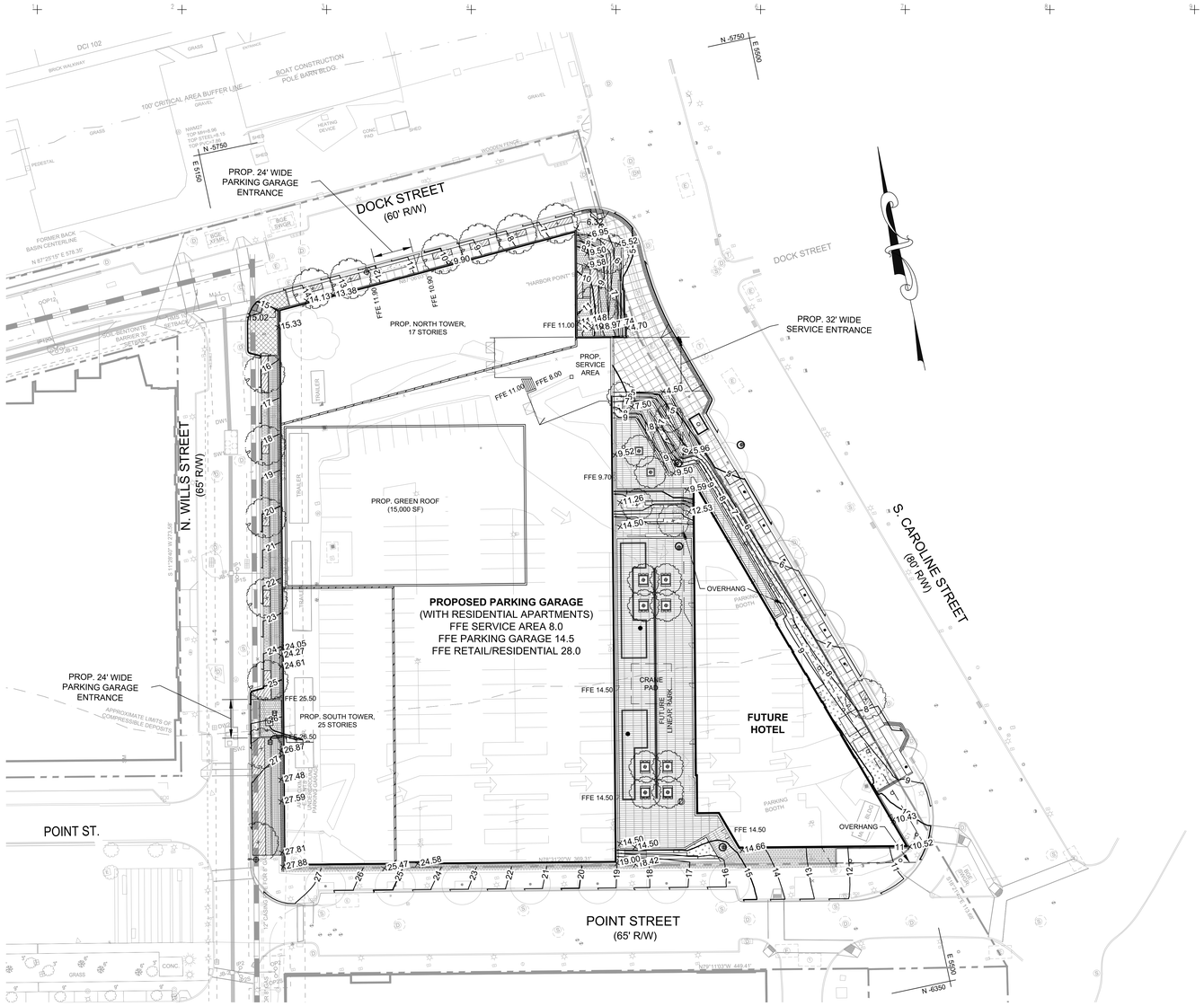

PROPOSED LEGEND

- LIMIT OF DISTURBANCE
- PROPERTY LINE
- BUILDING FOOTPRINT
- BUILDING OVERHANG
- PROPOSED HARDSCAPE, SEE LANDSCAPE DRAWINGS
- PROPOSED TREE, SEE LANDSCAPE DRAWINGS

REFERENCE NOTES

1. THIS CIVIL SITE PLAN REFLECTS THE PROPOSED ARCHITECTURAL FOOTPRINT PER BHC FILES RECEIVED 07.21.2021. SHOULD ANY DISCREPANCIES EXIST, THE ARCHITECT DRAWINGS SUPERSEDE.
2. THIS CIVIL SITE PLAN REFLECTS THE PROPOSED LANDSCAPE ARCHITECTURAL FOOTPRINT PER MRA FILES RECEIVED 07.22.2021. SHOULD ANY DISCREPANCIES EXIST, THE LANDSCAPE ARCHITECT DRAWINGS SUPERSEDE.
3. FOR EXISTING CONDITIONS LEGEND AND GENERAL PROJECT NOTES, SEE THE EXISTING CONDITIONS PLAN, C1.00.
4. FOR ERS CRITICAL STRUCTURES, SEE "EN" SERIES DRAWINGS.

ENVIRONMENTAL REMEDIATION SYSTEM PROTECTION

ALL WORK SHALL BE DONE IN A MANNER THAT PROTECTS THE EXISTING ENVIRONMENTAL REMEDIATION SYSTEM AND DOES NOT INTERFERE WITH THE SYSTEMS PERFORMANCE. SEE 'EN' SERIES DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

30 15 0 30 60

SCALE: 1" = 30'

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PARCEL 4 APARTMENT AND GARAGE

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	10/06/2021	Floodplain Submission
	10/11/2021	ESD #8077 SWM Concept
	11/01/2021	Check Set

title

SITE PLAN

drawn by:	JPS/ZWB
checked by:	RAF/CDK
scale:	AS SHOWN
project number:	20339.000
	scaled inch

sheet number

C2.00

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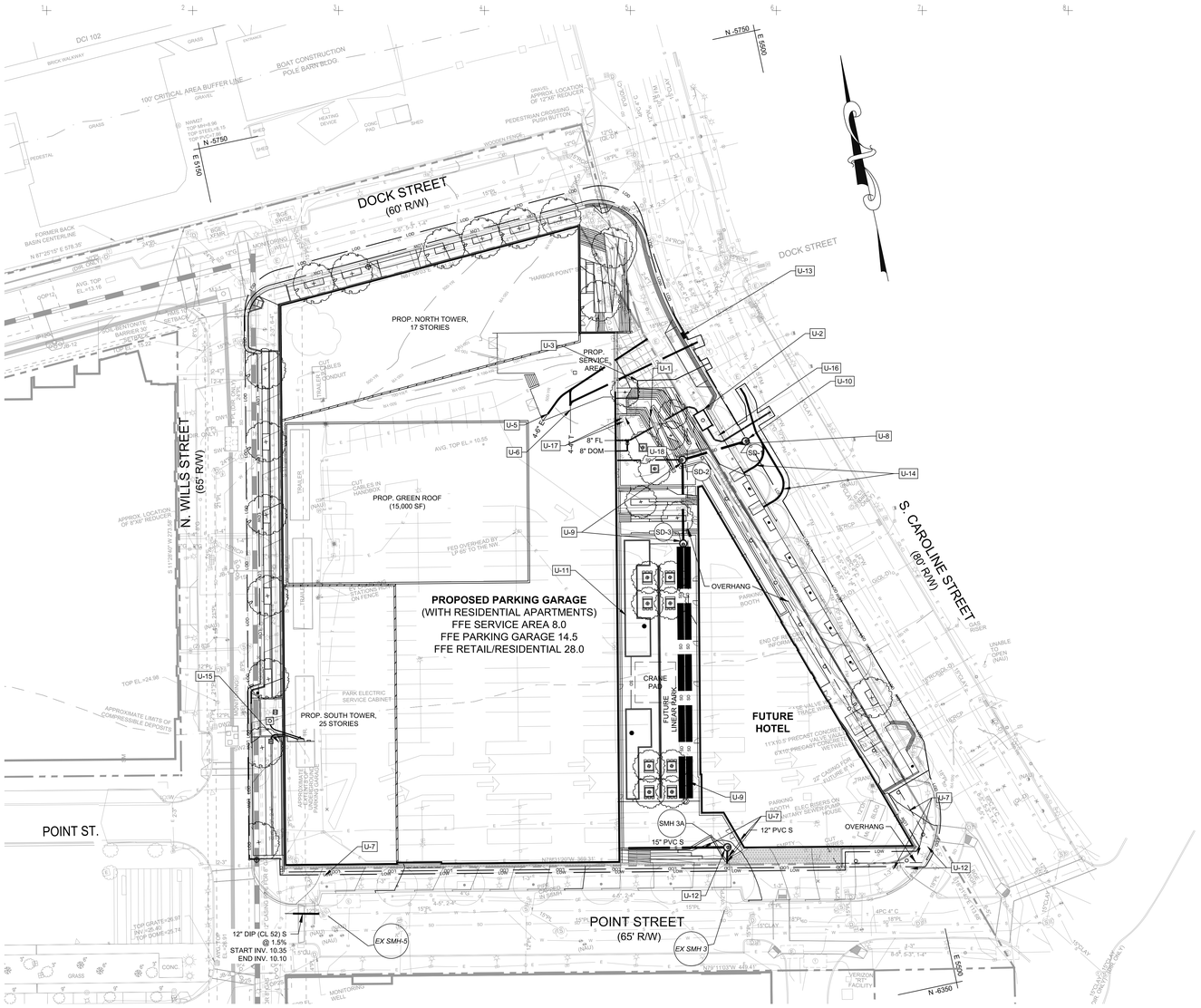

CONSTRUCTION NOTES

KEY U-1

U-1. 8" DIP MJ, CL 54 WATER SERVICE
U-2. 8" FM METER VAULT FOR FIRE AND DOMESTIC WATER SERVICE PER BC 847.01
U-3. BGE GAS SERVICE TO BGE GAS METER ROOM, BY OTHERS
U-4. NOT USED
U-5. PRIMARY ELECTRIC DUCTBANK WITH 3RD PARTY TELECOMMUNICATIONS CONDUITS
U-6. VERIZON SUBSIDIARY COMMUNICATION DUCTBANK, SEE MEP DRAWINGS
U-7. SANITARY SEWER LINE
U-8. STORM DRAIN LINE
U-9. STORM DRAIN MANHOLE
U-10. 48" PRECAST DOGHOUSE MANHOLE PER BC 831.07
U-11. CONTECH STORMFILTER, SEE C5.10 FOR DETAILS
U-12. SANITARY SEWER MANHOLE
U-13. REMOVE EXISTING INLET AND INSTALL MODIFIED TYPE 'S' DGT INLET, SEE DA CONSTRUCTION DETAILS
U-14. ELECTRIC DUCTBANK TO BGE SWITCHGEARS
U-15. RELOCATE EXISTING PARK SERVICE ELECTRIC PANEL TO FACE OF BUILDING WALL, SEE MEP DRAWINGS AND DA CONSTRUCTION DETAILS
U-16. EXISTING LIGHTPOLE AND HANDBOX TO BE REMOVED AND RESET
U-17. 8" WATER VALVES
U-18. 8" X 8" X 8" WATER TEE

PROPOSED LEGEND

LOD	LIMIT OF DISTURBANCE
W	WATER LINE
G	GAS LINE
E	ELECTRIC LINE
C	COMMUNICATION LINE
S	SANITARY SEWER LINE
SD	STORM DRAIN LINE
	DOMESTIC AND FIRE METER VAULT (8'X7')
Ⓢ	SANITARY SEWER MANHOLE

30 15 0 30 60

SCALE: 1" = 30'

REFERENCE NOTES

1. FOR EXISTING CONDITIONS LEGEND AND GENERAL PROJECT NOTES, SEE THE EXISTING CONDITIONS PLAN, C1.00.
2. SEE DEVELOPER AGREEMENT ("DA" SERIES) DRAWINGS FOR PROPOSED PUBLIC UTILITY WORK WITHIN ADJACENT RIGHT-OF-WAY.

DATUM:
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	10/11/2021	ESD #8077 SWM Concept
	11/01/2021	Check Set

title

UTILITY COMPOSITE PLAN

drawn by:	JPS/ZWB
checked by:	RAF/CDK
scale:	AS SHOWN
project number:	20339.000
	scaled inch

sheet number

C4.00

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MAINTENANCE AND LIABILITY

MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITY AND APPURTENANT DRAINAGE STRUCTURES SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE PROPERTY OWNER SHALL ALSO BE FULLY LIABLE FOR ALL DAMAGES OR INJURIES THAT MAY BE SUSTAINED BY ANY PERSON OR PROPERTY AS A RESULT OF ANY FAILURE OR MALFUNCTION OF THE STORMWATER MANAGEMENT FACILITY AND APPURTENANCES.

DATE

PRINT NAME — ADDRESS

SIGNATURE — TELEPHONE NUMBER

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND MEETS THE MINIMUM STANDARDS OF BALTIMORE CITY DEPARTMENT OF PUBLIC WORKS REQUIREMENTS AND SPECIFICATIONS.

CHRIS KRUPINSKI
PRINT NAME — SIGNATURE — DATE

RUMMEL, KLEPPER & KAHL, LLP
700 EAST PRATT STREET, SUITE 500
BALTIMORE, MARYLAND 21202
ADDRESS

(410) 728-2900
TELEPHONE NUMBER

OWNER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL PROPOSED WORK SHOWN IN THESE CONSTRUCTION DRAWING(S) AND APPROVED SEDIMENT CONTROL DRAWING(S) WILL BE ACCOMPLISHED PURSUANT TO THESE PLANS. I/WE ALSO UNDERSTAND THAT IT IS MY/OUR RESPONSIBILITY TO HAVE THE CONSTRUCTION SUPERVISED AND CERTIFIED INCLUDING SUBMITTAL OF "AS-BUILT" PLANS WITHIN THIRTY (30) DAYS OF COMPLETION BY A REGISTERED PROFESSIONAL ENGINEER.

PRINT NAME — SIGNATURE — DATE

ADDRESS — TELEPHONE NUMBER

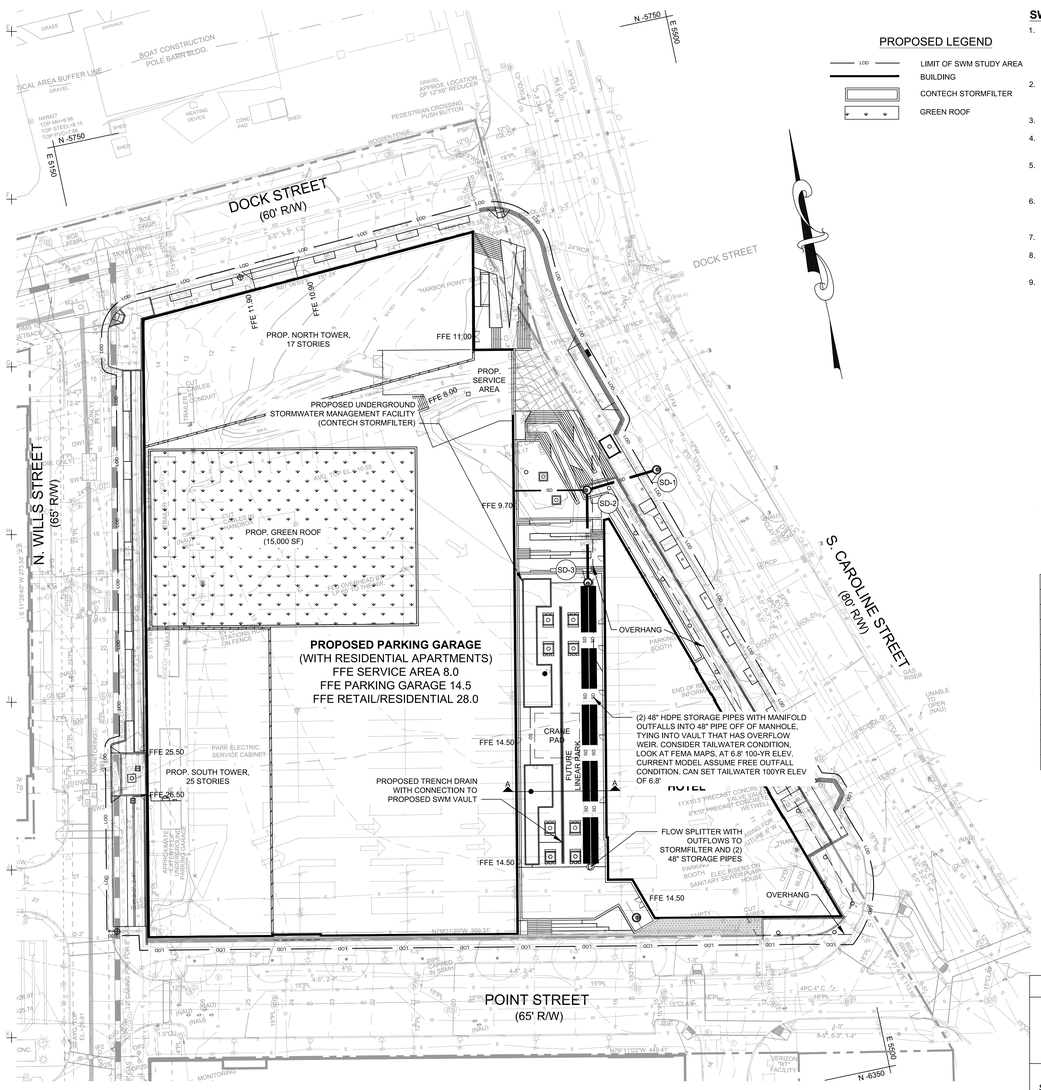
AS-BUILT CERTIFICATION

I DO HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS.

DATE

PRINT NAME — ADDRESS

SIGNATURE — TELEPHONE NUMBER



SCALE: 1" = 30'

PROPOSED LEGEND

- LIMIT OF SWM STUDY AREA
- BUILDING
- CONTECH STORMFILTER
- GREEN ROOF

SWM NOTES:

1. COORDINATES AND ELEVATIONS (INCLUDING FFE "FINISHED FLOOR ELEVATION" REFERENCED ON FLOORPLAN) ARE REFERRED TO THE BALTIMORE CITY SURVEY CONTROL SYSTEM AND TIED TO THE FOLLOWING TRAVERSE STATIONS PROVIDED BY MCLAREN ENGINEERING GROUP:

   GSW3 S 5813.2834 E 5134.9458 ELEV 15.06
   102 S 5873.1359 E 5458.4962 ELEV 4.68

2. SOILS INCLUDE :
   URBAN LAND, 0 TO 15 % SLOPES
   44 UC/ HSG-D CLASSIFICATION

3. SITE IS LOCATED WITHIN THE BALTIMORE HARBOR WATERSHED

4. SITE IS LOCATED IN THE 100/500 YR. FLOODPLAINS. SITE IS NOT LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA. SEE EXISTING CONDITIONS PLAN.

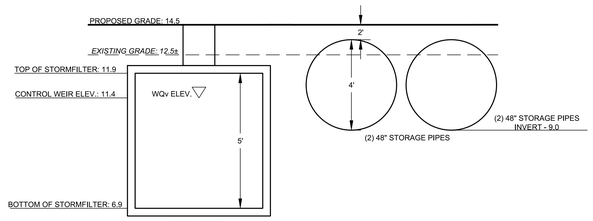
5. EXISTING IMPERVIOUSNESS FOR THE SITE IS 90%, WHICH IS HIGHER THAN 40%,THUS THE PROJECT IS CONSIDERED "RE- DEVELOPMENT" FOR STORMWATER MANAGEMENT PURPOSES. THE SWM REQUIREMENTS WILL BE MET VIA GREEN ROOF, UNDERGROUND PROPRIETARY FACILITY, AND FEE-IN-LIEU.

6. THE LIMIT OF DISTURBANCE SHOWN HEREON APPLIES TO EARTH DISTURBANCES AND IS USED ON THE EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLANS ONLY. AREAS EXCLUDED FROM THE SWM LOD ARE THE LINEAR UTILITY TRENCHING IN THE ROAD RIGHT-OF-WAY. FOR OVERALL PROJECT LIMIT OF WORK BOUNDARY, SEE THE DEMOLITION AND SITE PLANS.

7. FOR DRAINAGE AREA BOUNDARIES, SEE SHEET C5.30 & C5.31 (NOT APPLICABLE TO DDP SUBMISSION).

8. STORMWATER MANAGEMENT QUALITY CONTROL FOR ALL PARCEL 4 DEVELOPMENT (FUTURE HOTEL, LINEAR PARK, AND PARKING GARAGE WITH APARTMENTS) TO BE PROVIDED BY THE PROPOSED UNDERGROUND FACILITY AND GREEN ROOF, SHOWN HEREON.

9. STORMWATER MANAGEMENT QUANTITY CONTROL FOR ALL PARCEL 4 DEVELOPMENT (FUTURE HOTEL, LINEAR PARK, AND PARKING GARAGE WITH APARTMENTS) TO BE PROVIDED BY THE GREEN ROOF AND (2) 48" STORAGE PIPES.



SECTION A-A
NOT TO SCALE

STORMWATER MANAGEMENT IMPERVIOUS AREA SUMMARY

TOTAL LOD	129,000 sf.	2.96 ac.
ACTUAL EXISTING IMPERVIOUS AREA (PRE-DEVELOPMENT)	94,500 sf.	2.17 ac
EXISTING TREATED IMPERVIOUS (LOSS OF WATER QUALITY***)	65,000 sf.	1.49 ac
ADJUSTED EXISTING TOTAL IMPERVIOUS AREA (PRE-DEV. - TREATED IMP.)	29,500 sf.	0.68 ac
PROPOSED IMPERVIOUS AREA	129,000 sf.	2.96 ac
NEW IMP. AREA (PROPOSED IMP. - ADJUSTED EXISTING IMP. AREA)	99,500 sf.	2.28 ac
IMPERVIOUS AREA REQUIRING TREATMENT	114,250 sf.	2.62 ac
IMPERVIOUS AREA TREATED BY PARKING GARAGE GREEN ROOF	15,000 sf,	0.34 ac
IMPERVIOUS AREA TREATED BY HOTEL GREEN ROOF	0 sf.	0.00 ac
IMPERVIOUS AREA TREATED BY UNDERGROUND SWM FACILITY	91,300 sf.	2.10 ac
TOTAL IMPERVIOUS AREA TREATED	106,300 sf.	2.44 ac
FEE-IN-LIEU FOR IART NOT TREATED*	0.18 ac DEFICIT = $18,000.00	
FEE-IN-LIEU FOR CPV NOT TREATED**	2.96 ac DEFICIT = $7,400.00	
	TOTAL FEE-IN-LIEU = $25,400.00	

*FEE-IN-LIEU RATE $100,000/ACRE IART
** FEE-IN-LIEU RATE $2,500/ACRE CPV
*** LOSS OF WATER QUALITY DUE TO REMOVAL OF EXISTING BIORETENTION FACILITY. EXISTING IMPERVIOUS DRAINAGE AREA CONSIDERED PERVIOUS FOR SWM CALCULATIONS.

STORMWATER MANAGEMENT SITE REQUIREMENTS

REQUIREMENT	VOLUME REQUIRED	VOLUME PROVIDED	EXISTING DISCHARGE	PROPOSED DISCHARGE	NOTES
ESD_v (cf)	17,399 cf	9,435 cf	N/A	N/A	GREEN ROOF, CONTECH STORMFILTER
R_{ev} (cf)	N/A	N/A	N/A	N/A	REDEVELOPMENT
Cp_v (cf)	16,170 cf	0 cf	N/A	N/A	REDEVELOPMENT
Q_{p2} (cfs) SP1 SP2	N/A	N/A	22.41 1.89	21.72 1.37	GREEN ROOF, (2) 48" STORAGE PIPES
Q_{p100} (cfs) SP1 SP2	N/A	N/A	29.57 2.49	28.29 1.81	

ENVIRONMENTAL SITE DESIGN SUMMARY TABLE

PRACTICE	DIMENSIONS	DRAINAGE AREA		IMPERVIOUS AREA TREATED		STORAGE VOLUME PROVIDED BY BMP	TREATMENT VOLUME CREDITED, ESD_v	Re_v VOLUME PROVIDED	P_E PROVIDED
		SF	AC	SF	AC	CF	CF	CF	IN
STORMFILTER	LENGTH = 128' WIDTH VARIES FROM 8' TO 16'	91,300	2.10	91,300	2.10	5,473	7,297	N/A	1.0
GREEN ROOF	AREA = 15,000 SF MEDIA THICKNESS = 6"	15,000	0.34	15,000	0.34	N/A	2,138	N/A	1.8

DATUM:
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- BALTIMORE CITY VERTICAL DATUM

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project
PARCEL 4 APARTMENT AND GARAGE

1402 POINT STREET
BALTIMORE, MD 21231

seal

issued	date	description
	03/17/2021	SPRC
	05/25/2021	Schematic Design
	06/02/2021	SPRC Submission 2
	06/04/2021	ESD #8077 SWM Concept
	08/02/2021	Permit Set
	08/13/2021	ESD #8077 SWM Concept
	09/29/2021	DDP Permit Set
	10/06/2021	Floodplain Submission
	10/11/2021	ESD #8077 SWM Concept
	11/01/2021	Check Set

title

STORMWATER MANAGEMENT PLAN

BC DPW ESD #8077

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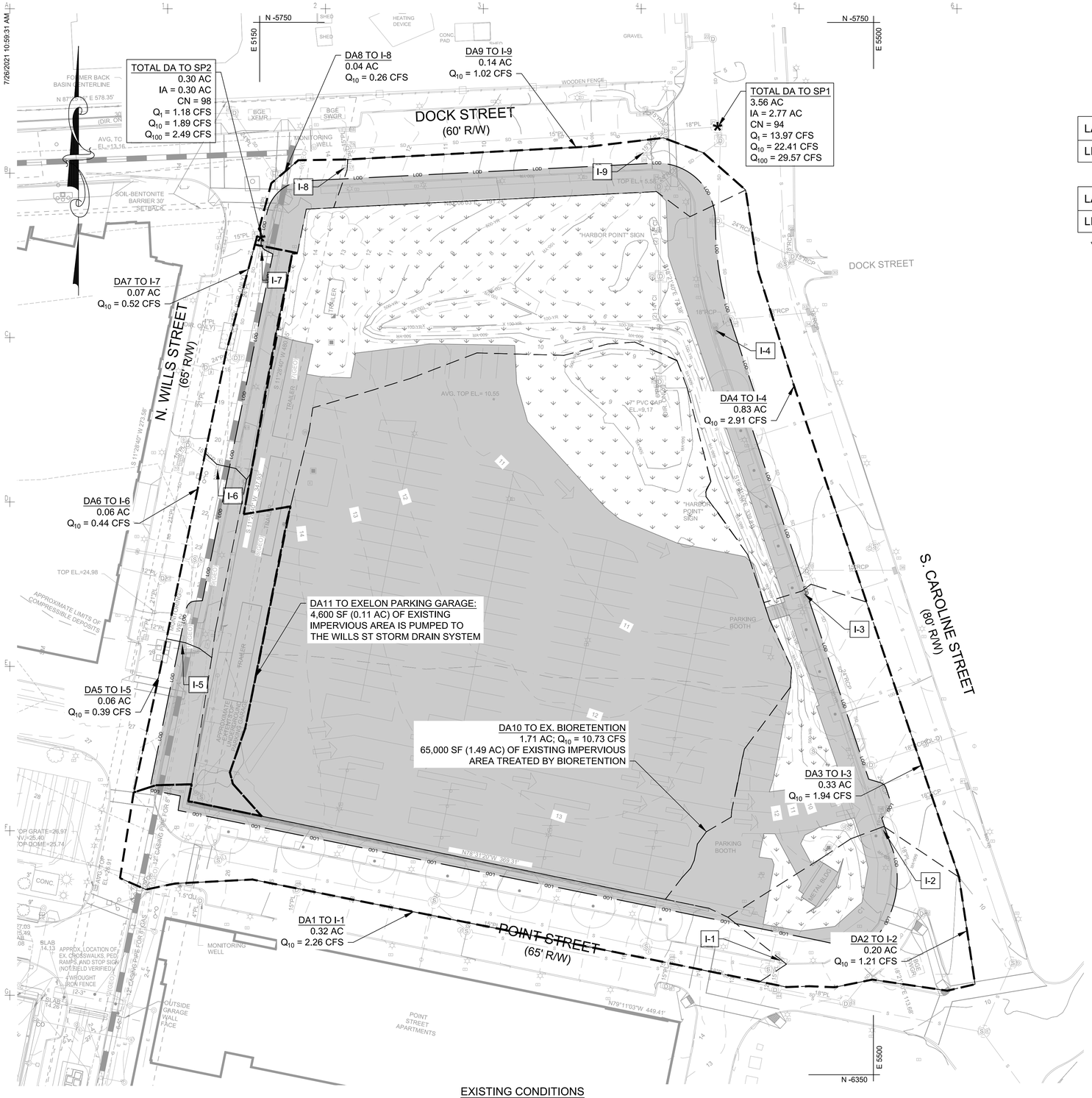

EXISTING CONDITIONS

EXISTING CONDITIONS LANDCOVER COVER SUMMARY TABLE (ACTUAL*)

LANDCOVER COVER	IMPERVIOUS		PERVIOUS		TOTAL	
LIMIT OF DISTURBANCE	94,500 SF	2.17 AC.	34,500 SF	0.79 AC.	**129,000 SF**	**2.96 AC.**

EXISTING CONDITIONS LANDCOVER COVER SUMMARY TABLE (ADJUSTED*)

LANDCOVER COVER	IMPERVIOUS		PERVIOUS		TOTAL	
LIMIT OF DISTURBANCE	29,500 SF	0.68 AC.	99,500 SF	2.28 AC.	**129,000 SF**	**2.96 AC.**

* 65,000 SF (1.49 AC) OF EXISTING IMPERVIOUS AREA LOST WATER QUALITY BENEFITS DUE TO THE REMOVAL OF THE EXISTING BIORETENTION FACILITY. THIS AREA IS NOW CLASSIFIED AS EXISTING PERVIOUS, AND WATER QUALITY TREATMENT MUST BE PROVIDED FOR 100% OF THE AREA.

EXISTING CONDITIONS PEAK FLOW RATES TO EACH INLET

Inlet	Q_1 (cfs)	Q_{10} (cfs)	Q_{100} (cfs)
1	1.09	2.04	3.53
2	0.63	1.23	2.16
3	1.05	2.07	3.63
4	1.90	4.47	8.50
5	0.20	0.37	0.63
6	0.20	0.37	0.63
7	0.28	0.53	0.92
8	0.13	0.25	0.42
9	0.48	0.90	1.55

EXISTING LEGEND

- LOD — LIMIT OF SWM STUDY AREA
- PROPERTY LINE
- DRAINAGE AREA BOUNDARY
- EXISTING PERVIOUS AREA
- EXISTING IMPERVIOUS AREA
- * STUDY POINT

30 15 0 30 60

SCALE: 1" = 30'

DATUM:
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project

PARCEL 4 APARTMENT AND GARAGE

1402 POINT STREET
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ESD #8077 SWM CONCEPT SUBMISSION

issued	date	description
	06/04/2021	ESD #8077 SWM Concept
	08/13/2021	ESD #8077 SWM Concept
	09/27/2021	ESD #8077 SWM Concept

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EXISTING DRAINAGE AREA MAP

BC DPW ESD #8077

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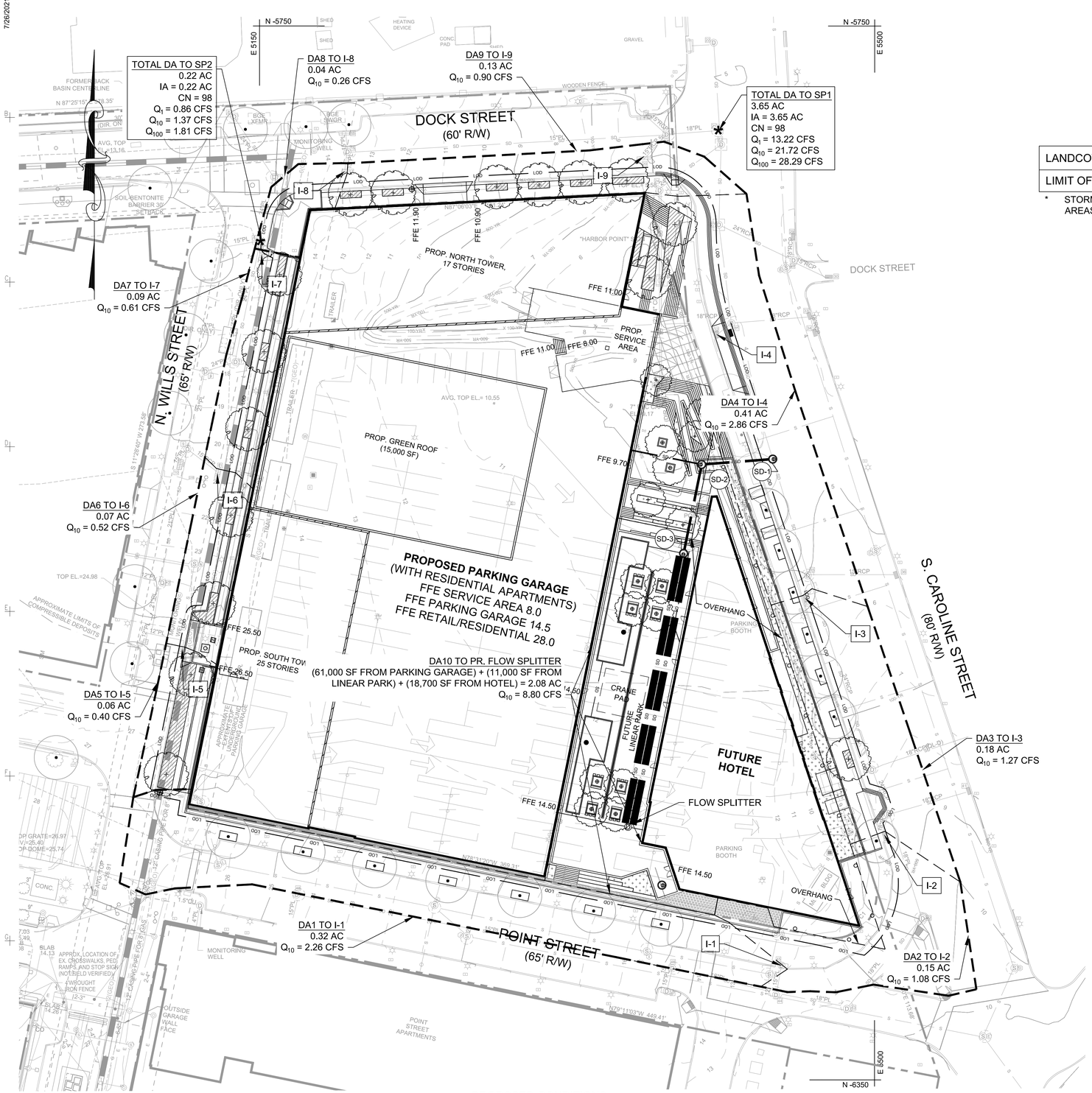

PROPOSED CONDITIONS

PROPOSED CONDITIONS LANDCOVER COVER SUMMARY TABLE

LANDCOVER COVER	IMPERVIOUS		PERVIOUS		TOTAL	
LIMIT OF DISTURBANCE	129,000 SF	2.96 AC.	0* SF	0.00* AC.	**129,000 SF**	**2.96 AC.**

* STORMWATER MANAGEMENT CALCULATIONS ARE CONSERVATIVE AND ASSUME NO PROPOSED PERVIOUS AREAS, EVEN THOUGH MINOR AMOUNTS WILL BE PROVIDED IN THE WAY OF SMALL PLANTERS AND TREE PITS.

PROPOSED CONDITIONS PEAK FLOW RATES TO EACH INLET

Inlet	Q_1 (cfs)	Q_{10} (cfs)	Q_{100} (cfs)
1	1.09	2.04	3.53
2	0.50	0.94	1.62
3	0.61	1.14	1.98
4	1.39	2.62	4.51
5	0.20	0.37	0.63
6	0.24	0.45	0.78
7	0.30	0.57	0.99
8	0.13	0.25	0.42
9	0.44	0.82	1.41

PROPOSED LEGEND

- LOD — LIMIT OF SWM STUDY AREA
- PROPERTY LINE
- DRAINAGE AREA BOUNDARY
- PROPOSED PERVIOUS AREA
- * STUDY POINT

30 15 0 30 60

SCALE: 1" = 30'

DATUM:
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PARCEL 4 APARTMENT AND GARAGE

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ESD #8077 SWM CONCEPT SUBMISSION

issued	date	description
	06/04/2021	ESD #8077 SWM Concept
	08/13/2021	ESD #8077 SWM Concept
	09/27/2021	ESD #8077 SWM Concept

title
PROPOSED DRAINAGE AREA MAP

BC DPW ESD #8077

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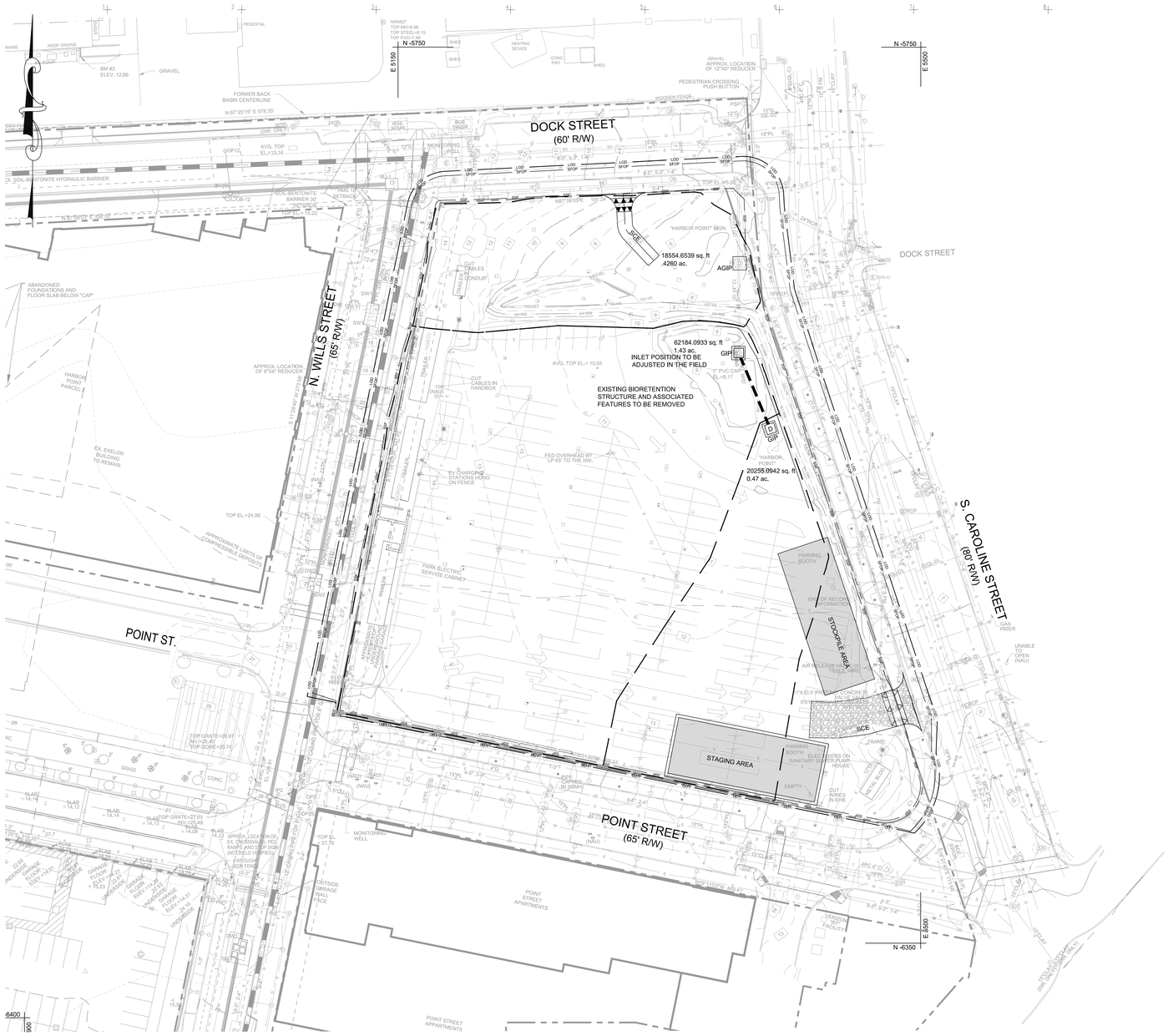

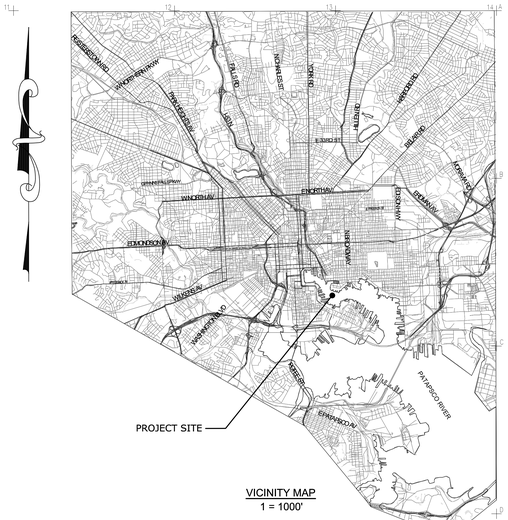

VICINITY MAP
1 = 1000'

ESC LEGEND

- LOD — LIMIT OF DISTURBANCE
- SFOP — SILT FENCE ON PAVEMENT
- SSF — SUPER SILT FENCE
- DRAINAGE AREA TO ESC DEVICE
- STOCKPILE/STAGING AREA
- AGIP / GIP — AT-GRADE INLET PROTECTION / GABION INLET PROTECTION
- SCE — STABILIZED CONSTRUCTION ENTRANCE

30 15 0 30 60
SCALE: 1" = 30'

DATUM:
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DETAILED DEVELOPMENT PLAN

issued	date	description
	03/17/2021	SPRC
	05/25/2021	Schematic Design
	06/02/2021	SPRC Submission 2
	06/04/2021	ESD #8077 SWM Concept
	08/02/2021	Permit Set
	08/13/2021	ESD #8077 SWM Concept
	09/29/2021	DDP Permit Set
	10/06/2021	Floodplain Submission
	10/11/2021	ESD #8077 SWM Concept
	11/01/2021	Check Set

title

EROSION AND SEDIMENT CONTROL PLAN PH1

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project number:	20339.000
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sheet number

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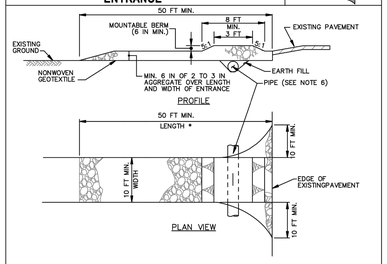
DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL SCE



CONSTRUCTION SPECIFICATIONS

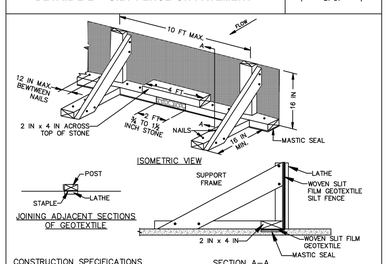
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-2 SILT FENCE ON PAVEMENT

STANDARD SYMBOL SFOP



CONSTRUCTION SPECIFICATIONS

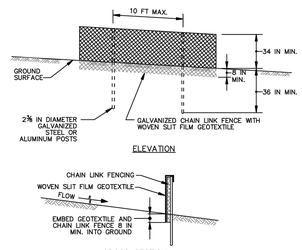
1. USE NOMINAL 2 INCH X 4 INCH LUMBER.
2. USE WOVEN SLIT FILM GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
3. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
4. SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
5. PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
6. KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
7. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
8. PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
9. SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.
10. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

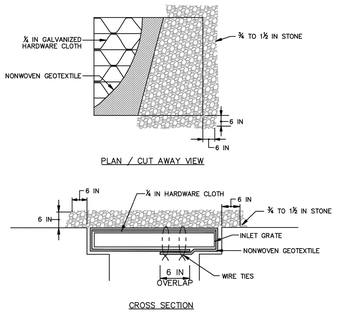
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

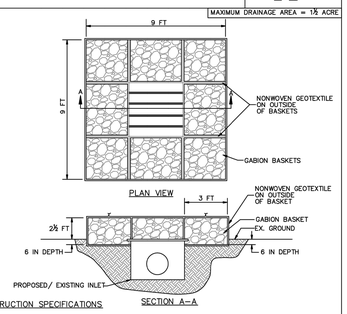
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-7 GABION INLET PROTECTION

STANDARD SYMBOL GIP

MAXIMUM DRAINAGE AREA = 1½ ACRE



CONSTRUCTION SPECIFICATIONS

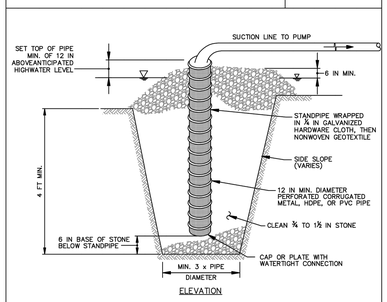
1. USE BASKETS MADE OF 11 GAUGE WIRE OR HEAVIER.
2. WRAP 3 FEET x 3 FEET GABION BASKETS (LENGTH VARIABLE) WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVERLAPPING AT THE TOP AND FASTEN THE GEOTEXTILE AT THE TOP OF THE BASKET WITH WIRE FASTENERS (HOG RINGS) AT A MAXIMUM OF 1 FOOT INTERVALS ALONG THE SEAM.
3. AVOID TEARING OR DAMAGING GEOTEXTILE.
4. ENTRENCH GABION BASKETS TO A DEPTH OF 6 INCHES.
5. PLACE AND INTERLOCK GABION BASKETS WITH NO GAPS.
6. FILL GABION BASKETS WITH CLEAN 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR OR MESH.
7. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-2 SUMP PIT

STANDARD SYMBOL SP



CONSTRUCTION SPECIFICATIONS

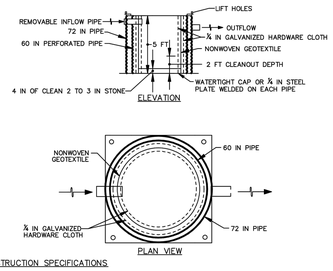
1. USE 12 INCH OR LARGER DIAMETER CORRUGATED METAL, HDPE, OR PVC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER. BOTTOM OF PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
2. WRAP PIPE WITH ¼ INCH GALVANIZED HARDWARE CLOTH AND WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
3. EXCAVATE PIT TO THREE TIMES THE PIPE DIAMETER AND FOUR FEET IN DEPTH. PLACE ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
4. SET TOP OF PIPE MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
5. BACKFILL PIT AROUND THE PIPE WITH ¾ TO 1½ INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
6. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
7. A SUMP PIT REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, REMOVE PERFORATED PIPE AND REPLACE GEOTEXTILE AND STONE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-3 PORTABLE SEDIMENT TANK

STANDARD SYMBOL PST



CONSTRUCTION SPECIFICATIONS

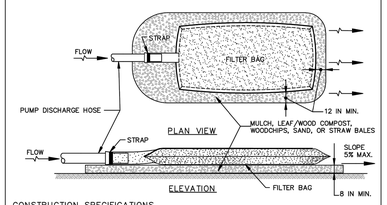
1. PROVIDE 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP CAPACITY. REQUIRED STORAGE VOLUME MAY BE ATTAINED BY PLACEMENT OF TANKS IN PARALLEL WITH INFLOW EVENLY DISTRIBUTED AMONG TANKS. OVERTOPPING OF TANKS IS NOT PERMITTED.
2. USE 60 INCH CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER FOR THE INNER PIPE. LINE PIPE WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, SANDWICHED BETWEEN, AND ATTACHED TO, ¼ INCH HARDWARE CLOTH.
3. OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.
4. ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE.
5. USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH INVERT LOWER THAN INFLOW PIPE
6. INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.
7. PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A PORTABLE SEDIMENT TANK REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT FROM INNER PIPE WHEN IT REACHES TWO FEET IN DEPTH. IF SYSTEM CLOGS, PULL OUT INNER PIPE, REMOVE ACCUMULATED SEDIMENT, AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL F-4 FILTER BAG

STANDARD SYMBOL FB



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D–4632
PUNCTURE	150 LB	ASTM D–4833
FLOW RATE	70 GAL/MIN/FT²	ASTM D–4491
PERMITTIVITY (SEC⁻¹)	1.2 SEC⁻¹	ASTM D–4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D–4355
APPARENT OPENING SIZE (AOS)	0.15–0.18 MM	ASTM D–4751
SEAM STRENGTH	90%	ASTM D–4632

6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

BHC ARCHITECTS

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1300 Thames St., Suite 10, Baltimore, Maryland 21231
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BEATTY DEVELOPMENT
1300 THAMES STREET, SUITE 10
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CONSULTING ARCHITECT
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1040 HULL STREET, SUITE 100
BALTIMORE, MD 21230 (410) 347-8500

STRUCTURAL ENGINEER
MORRIS & RITCHIE ASSOCIATES
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TOWSON, MARYLAND 21286 (410) 821-1690

MEP + FP ENGINEER
JDB ENGINEERING
913 RIDGEBROOK ROAD, SUITE 216
SPARKS, MARYLAND 21152 (410) 771-3433

CIVIL ENGINEER
RK&K
700 EAST PRATT STREET, SUITE 500
BALTIMORE, MARYLAND 21202 (410) 428-2900

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3300 CLIPPER MILL ROAD, SUITE 200
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BALTIMORE, MARYLAND 21209 (410) 823-1060

ENVIRONMENTAL ENGINEER
GEO-TECHNOLOGY ASSOCIATES
1414 KEY HIGHWAY, SUITE 201P
BALTIMORE, MARYLAND 21230 (443) 286-6562

key

project

PARCEL 4 APARTMENT AND GARAGE

1402 POINT STREET
BALTIMORE, MD 21231

seal

DETAILED DEVELOPMENT PLAN

issued	date	description
	03/17/2021	SPRC
	05/25/2021	Schematic Design
	06/02/2021	SPRC Submission 2
	06/04/2021	ESD #8077 SWM Concept
	08/02/2021	Permit Set
	08/13/2021	ESD #8077 SWM Concept
	09/29/2021	DDP Permit Set
	10/06/2021	Floodplain Submission
	10/11/2021	ESD #8077 SWM Concept
	11/01/2021	Check Set

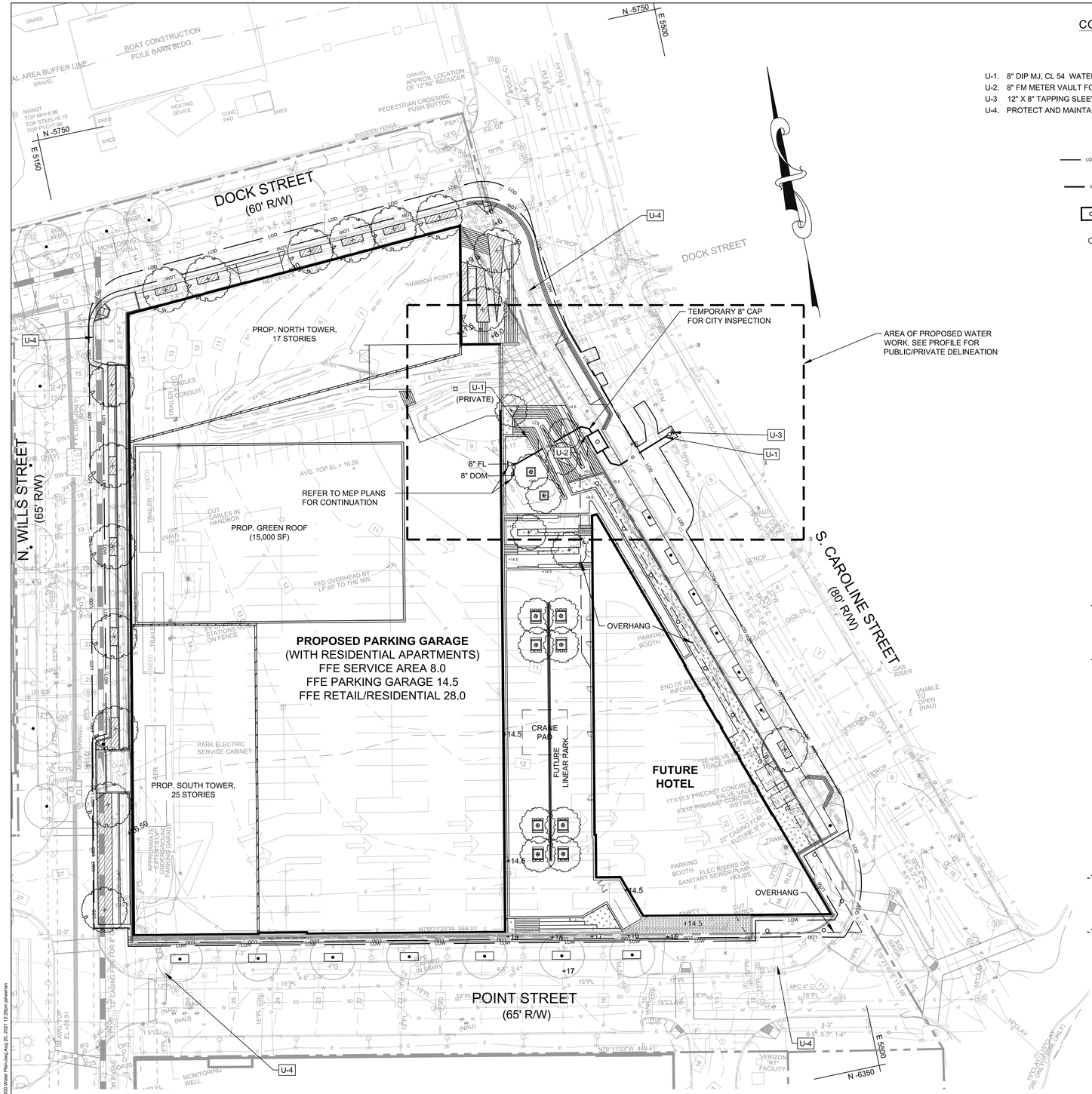
title

EROSION AND SEDIMENT CONTROL DETAILS

drawn by:	JPS
checked by:	RAF
scale:	AS SHOWN
project number:	20339.000
	scaled inch

sheet number

C6.02



SCALE: 1" = 30'

CONSTRUCTION NOTES

KEY U-1

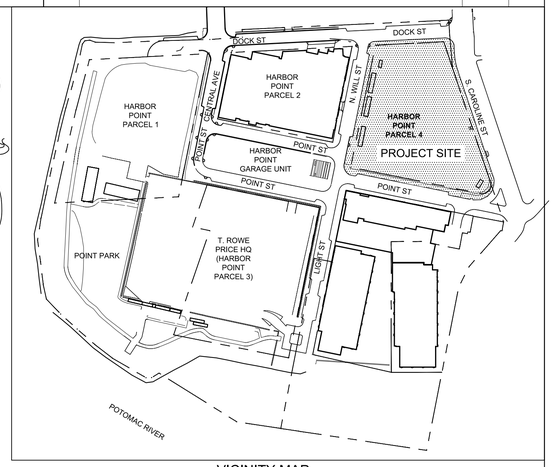
U-1. 8" DIP MJ, CL 54 WATER SERVICE
U-2. 8" FM METER VAULT FOR FIRE AND DOMESTIC WATER SERVICE (11'L x 7'W INSIDE DIMENSIONS)
U-3 12" X 8" TAPPING SLEEVE AND 8" VALVE AND BOX PER BC 834.03
U-4. PROTECT AND MAINTAIN IN SERVICE THE EXISTING FIRE HYDRANT

PROPOSED LEGEND

LOD	LIMIT OF DISTURBANCE
W	WATER LINE
	DOMESTIC AND FIRE METER VAULT
	SHUTOFF VALVE

AS BUILT REVISIONS
BY:
DATE:

REVISIONS			
NO.	DESCRIPTION	DATE	BY



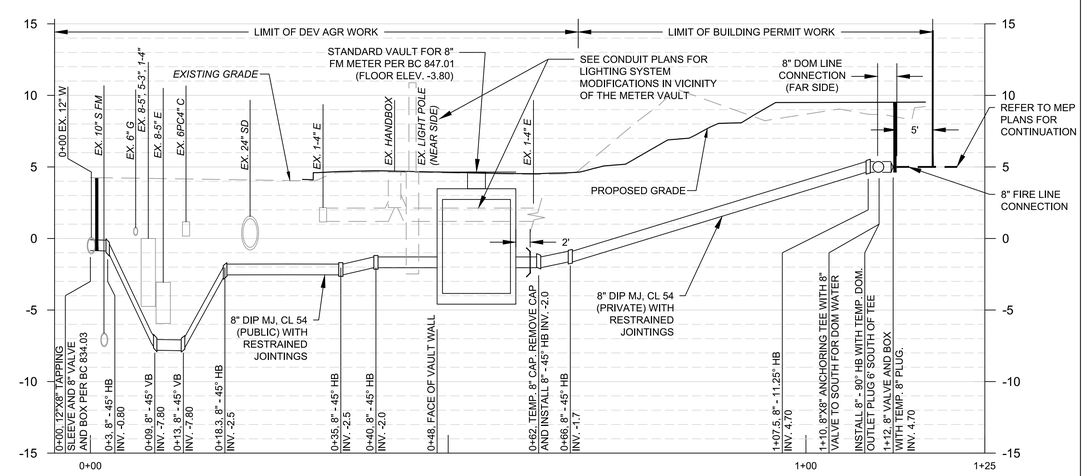
VICINITY MAP
SCALE: 1" = 200'

200 100 0 200 400
SCALE: 1" = 200'

BILL OF MATERIALS*

QUANTITY	SIZE	DESCRIPTION
1	12" x 8"	BC 834.03 TAPPING SLEEVE AND VALVE
1	8"	BC 847.01 8" FM METER VAULT
55 LF	8"	DIP. CL 54
2	8"	45 DEG HORIZ BEND
4	8"	45 DEG VERT BEND
1	8"	TEMPORARY CAP

* BILL OF MATERIALS IS PROVIDED FOR REVIEW AND APPROVAL BY CITY FORCES AND DOES NOT RELIEVE THE CONTRACTOR OF INSTALLING THE QUANTITIES NEEDED FOR THE COMPLETE INSTALLATION AT NO ADDITIONAL COST TO THE OWNER.



10 5 0 10 20
SCALE: 1" = 10'

5 2.5 0 5 10
SCALE: 1" = 5'

WATER SERVICE
SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

DA200

HARBOR POINT PARCEL 4 HOLDINGS, LLC
OWNER/DEVELOPER/APPLICANT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
DEVELOPER AGREEMENT No.XXXX
HARBOR POINT PARCEL 4

1402 POINT ST

WATER PLAN AND PROFILE

DIRECTOR, DEPARTMENT OF PUBLIC WORKS DATE

CHIEF, OFFICE OF ENGINEERING & CONSTRUCTION DATE

PRELIMINARY SUBMISSION

PROJECT DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

RK&K
P: 410.728.2900
700 E. Pratt Street, Suite 500 | Baltimore, MD 21202
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions
Contact: John d'Epagnier

SCALE: AS SHOWN DATE: AUGUST 20, 2021
WARD 03, SECTION 07, BLOCK 1815, LOT 004 SHEET 04 OF 13

WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

DESIGNED: RAF/FWS
DRAWN BY: JPS
CHECKED BY: CDK

BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
APPROVED BY:											
DATE APPROVED:											

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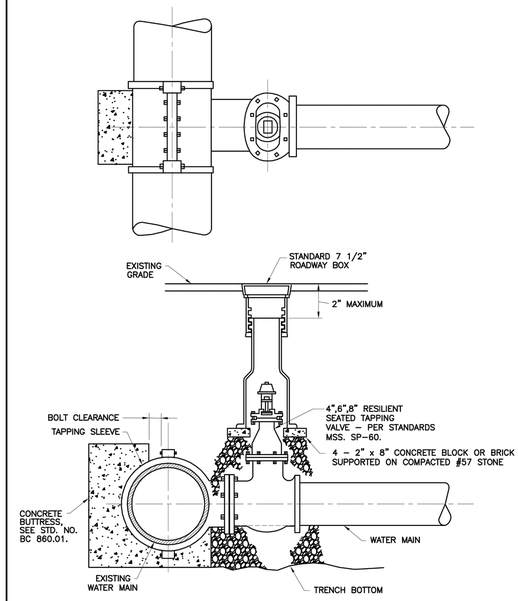
STANDARD WATER NOTES

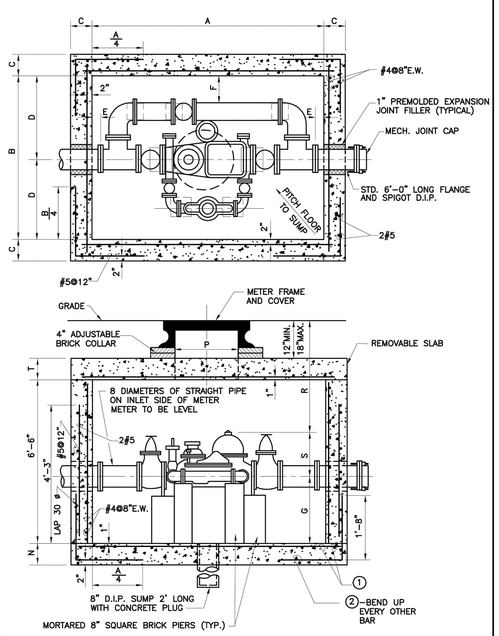
1. THE CONTRACTOR MUST NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE (5) DAYS PRIOR BEGINNING WORK
2. NOTIFY WATER AND WASTEWATER MAINTENANCE DIVISION (410-396-7870) AT LEAST TWO (2) WEEKS PRIOR TO START UP OF CONSTRUCTION ON THE WATER SERVICE. FOR SANITARY, CONDUIT, STORM WATER SERVICES, CONTACT THE PERMIT INSPECTION SECTION (410-396-4840). THE CONTRACTOR MUST RECEIVE WRITTEN NOTICE TO PROCEED FROM WATER AND WASTEWATER MAINTENANCE DIVISION OR THE PERMIT INSPECTION SECTION PRIOR TO PERFORMING ANY WORK.
3. FOR METER INSTALLATION, CONTRACTOR MUST NOTIFY BALTIMORE CITY, BUREAU OF WATER AND WASTEWATER (410-396-1663) 72 HOURS BEFORE STARTING WORK. COMPLETE METER INSTALLATION TO BE INSPECTED BY THE WATER AND WASTEWATER MAINTENANCE DIVISION REPRESENTATIVE PRIOR TO PLACEMENT OF TOP SLAB.
4. THE CONTRACTOR SHALL ARRANGE TO PICK UP METER AT THE DEPARTMENT OF PUBLIC WORKS METER SHOP ON FRANKLINTOWN ROAD.
5. ALL EXISTING WATER VALVES SHALL BE OPERATED BY WATER AND WASTERWATER MAINTENANCE DIVISION FORCES ONLY. NOTFIY MR. RON BROOKS (410-396-7807) AT LEAST SEVEN (7) WORKING DAYS IN ADVANCE OF ANY NECESSARY VALVE OPERATIONS.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE PUBLIC WORKS DEVELOPER"S AGREEMENT AND THE CITY OF BALTIMORE BOOK OF STANDARDS, CITY OF BALTIMORE MANUAL OF DESIGN PROCEDURE AND CRITERIA
7. THE CONTRACTOR SHALL OBSERVE EXTREME CAUTION WHEN WORKING NEAR OR OVER EXISTING WATER FACILITIES.
8. ALL SERVICES MUST BE FLUSHED PRIOR TO SETTING METERS.
9. SERVICE MUST BE CAPPED AND THE COMPLETED SERVICE WILL BE VISUALLY INSPECTED FOR LEAKS.
10. ALL SERVICES TO BE ABANDONED MUST BE ABANDONED AT THE MAINS AND ALL METERS MUST BE RETURNED TO BALTIMORE CITY.
11. THE DEVELOPER MUST VERIFY THROUGH THE UTILITY BILLING SECTION (410-396-5533) THE SERVICE ACCOUNT AND METER NUMBERS FOR ALL EXISTING WATER SERVICES TO REMAIN OR TO BE ABANDONED AND SHOWN ON THE PROPOSED PLANS.
12. METERS ARE NOT PERMITTED TO BE INSTALLED IN THE ROADWAY OR DRIVEWAYS.
13. CONTRACTOR MUST NOTIFY BGE (410-281-3507) AT LEAST TWO (2) DAYS PRIOR TO CONSTRUCTION.
14. DUCTILE IRON PIPE SHALL BE CLASS 54.
15. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF WATER AND WASTEWATER, METER REPAIR SHOP (410-396-0170)AT LEAST ONE (1) WEEK PRIOR TO PICKUP OF METERS.
16. METERS DESIGNATED FOR A SPECIFIC LOCATION OR ADDRESS SHALL NOT BE RELOCATED WITHOUT THE WRITTEN PERMISSION OF THE BUREAU OF WATER AND WASTEWATER.
17. THE PROPOSED WATER SERVICE CONNECTION WILL BE INSTALLED A MINIMUM OF FIVE (5) FEET FROM SANITARY SEWER HOUSE CONNECTION.
18. STANDARD BUTTRESSES FOR VERTICAL BENDS AND CAPS SHALL CONFORM B.C. 837.06 AND 837.22.
19. CONTRACTOR SHALL CONFIRM INVERT ELEVATIONS OF EXISTING WATER MAINS AND ALL UTILITY CROSSINGS PRIOR TO ANY NEW CONSTRUCTION. ANY DEVIATION NOTED FROM TEST PIT INFORMATION WILL REQUIRE RED LINE REVISED PLANS APPROVED BY THE UTILITY ENGINEERING SECTION PRIOR TO ANY NEW CONSTRUCTION.



NOTE:
ALL TAPPING VALVES SHALL CONFORM TO DPW – WATER & WASTEWATER APPROVED STANDARDS.

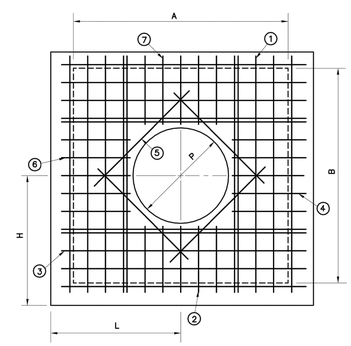
APPROVED: HEAD, BUREAU OF WATER AND WASTEWATER / DIRECTOR, DEPARTMENT OF PUBLIC WORKS	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED: 3 / 2008	REVISED	REVISED
	STANDARD INSTALLATION OF TAPPING VALVE WITH ROADWAY BOX (4" - 8")	STANDARD NO. BC 834.03		
		SCALE : NONE	SHEET 1 OF 1	

AS BUILT REVISIONS	REVISIONS			
	NO.	DESCRIPTION	DATE	BY
BY:				
DATE:				



NOTE: CONCRETE SHALL BE MIX 3.

	4" F.M. WITH BYPASS	6" F.M. WITH BYPASS	8" F.M. WITH BYPASS	10" F.M. WITH BYPASS	12" F.M. WITH BYPASS
SIZE	4"	6"	8"	10"	12"
A	7'–11"	9'–8"	10'–10"	13'–0"	13'–6"
B	5'–6"	6'–0"	6'–11"	8'–6"	8'–6"
C	9"	9"	9"	9"	9"
D	2'–9"	3'–0"	3'–5 1/2"	4'–3"	4'–3"
E	9"	9"	9"	9"	9"
F	1'–3"	1'–2"	1'–4"	1'–8"	1'–7"
G	2'–8"	2'–5"	2'–2"	2'–2"	2'–2"
H	3'–6"	3'–9"	4'–2 1/2"	5'–0"	5'–0"
L	4'–8 1/2"	5'–7"	6'–2"	7'–3"	7'–6"
N	6"	6"	6"	6"	6"
P	30"	30"	30"	30"	30"
R	4'–5" 4'–11"	4'–5" 4'–11"	4'–4" 4'–10"	3'–8" 4'–2"	3'–8" 4'–2"
S	1'–2 1/2"	1'–5 1/2"	1'–9 1/2"	2'–6"	2'–6"
①	#4@12"E.W.	#4@12"E.W.	#4@12"E.W.	#4@9"E.W.	#4@9"E.W.
②	#5@6"	#5@6"	#5@6"	#5@4 1/2"	#5@4 1/2"



		ROOF SLAB MATERIAL							CONCRETE QUANTITY (CUBIC YARDS)		
		STRAIGHT BARS									
SIZE	T	REBARS	①	②	③	④	⑤	⑥	⑦	WALLS	FLOOR	ROOF SLAB
4"	10"	#6@7"	13@6'–8"	5@1'–11"	9@9'–1"	5@3'–1"	4@3'–3"	5@3'–1"	5@1'–11"	5.42	1.22	2.03
6"	10"	#6@6 1/2"	17@7'–2"	5@2'–2"	11@10'–10"	5@4'–0"	4@3'–3"	5@4'–0"	5@2'–2"	6.20	1.55	2.58
8"	10"	#6@5"	25@8'–1"	6@2'–7 1/2"	17@12'–0"	6@4'–7"	4@3'–3"	6@4'–7"	6@2'–7 1/2"	6.95	1.92	3.20
10"	10"	#6@4 1/2"	33@9'–8"	7@3'–5"	23@14'–2"	7@5'–8"	4@3'–3"	7@5'–8"	7@3'–5"	8.37	2.69	4.48
12"	10"	#6@4 1/2"	33@9'–8"	7@3'–5"	23@14'–8"	7@5'–11"	4@3'–3"	7@5'–11"	7@3'–5"	8.49	2.78	4.63

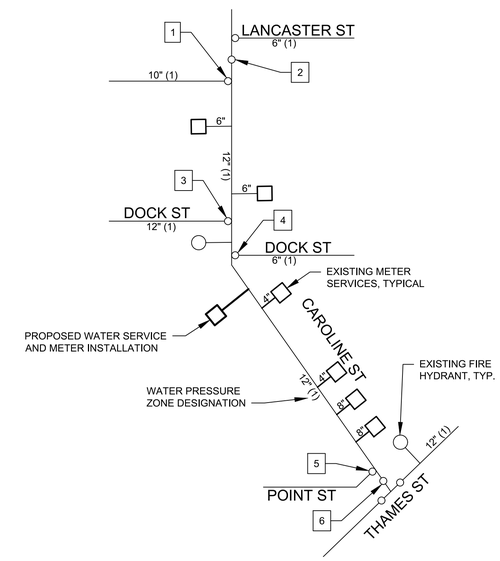
APPROVED: HEAD, BUREAU OF WATER AND WASTEWATER / DIRECTOR, DEPARTMENT OF PUBLIC WORKS	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED: 3 / 2008	REVISED	REVISED
	STANDARD VAULT FOR 4", 6", 8", 10", & 12" F.M. METERS	STANDARD NO. BC 847.01		
		SCALE : NONE	SHEET 1 OF 3	

APPROVED: HEAD, BUREAU OF WATER AND WASTEWATER / DIRECTOR, DEPARTMENT OF PUBLIC WORKS	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED: 3 / 2008	REVISED	REVISED
	REBAR SCHEDULE FOR STANDARD VAULT FOR 4", 6", 8", 10", & 12" F.M. METERS	STANDARD NO. BC 847.01		
		SCALE : NONE	SHEET 2 OF 3	

APPROVED: HEAD, BUREAU OF WATER AND WASTEWATER / DIRECTOR, DEPARTMENT OF PUBLIC WORKS	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED: 3 / 2008	REVISED	REVISED
	ROOF SLAB AND CONCRETE QUANTITIES FOR STANDARD VAULT FOR 4", 6", 8", 10", & 12" F.M. METERS	STANDARD NO. BC 847.01		
		SCALE : NONE	SHEET 3 OF 3	

SHUT OFF DIAGRAM LEGEND

- 1 – VALVE ON MAIN
- EXISTING FIRE HYDRANT
- SHUTOFF VALVE
- PROPOSED METER
- PROPOSED FIRE HYDRANT



SHUT OFF DIAGRAM

NOT TO SCALE

DA201

HARBOR POINT PARCEL 4 HOLDINGS, LLC
OWNER/DEVELOPER/APPLICANT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

DEVELOPER AGREEMENT No.XXXX
HARBOR POINT PARCEL 4

1402 POINT ST

WATER DETAILS AND NOTES

DIRECTOR, DEPARTMENT OF PUBLIC WORKS DATE

CHIEF, OFFICE OF ENGINEERING & CONSTRUCTION DATE

PRELIMINARY SUBMISSION

PROJECT DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

RK&K
P: 410.728.2900
700 E. Pratt Street, Suite 500 | Baltimore, MD 21202
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions
Contact: John d'Epagnier

SCALE: AS SHOWN DATE: AUGUST 20, 2021
WARD 03, SECTION 07, BLOCK 1815, LOT 004 **SHEET 05 OF 13**

WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

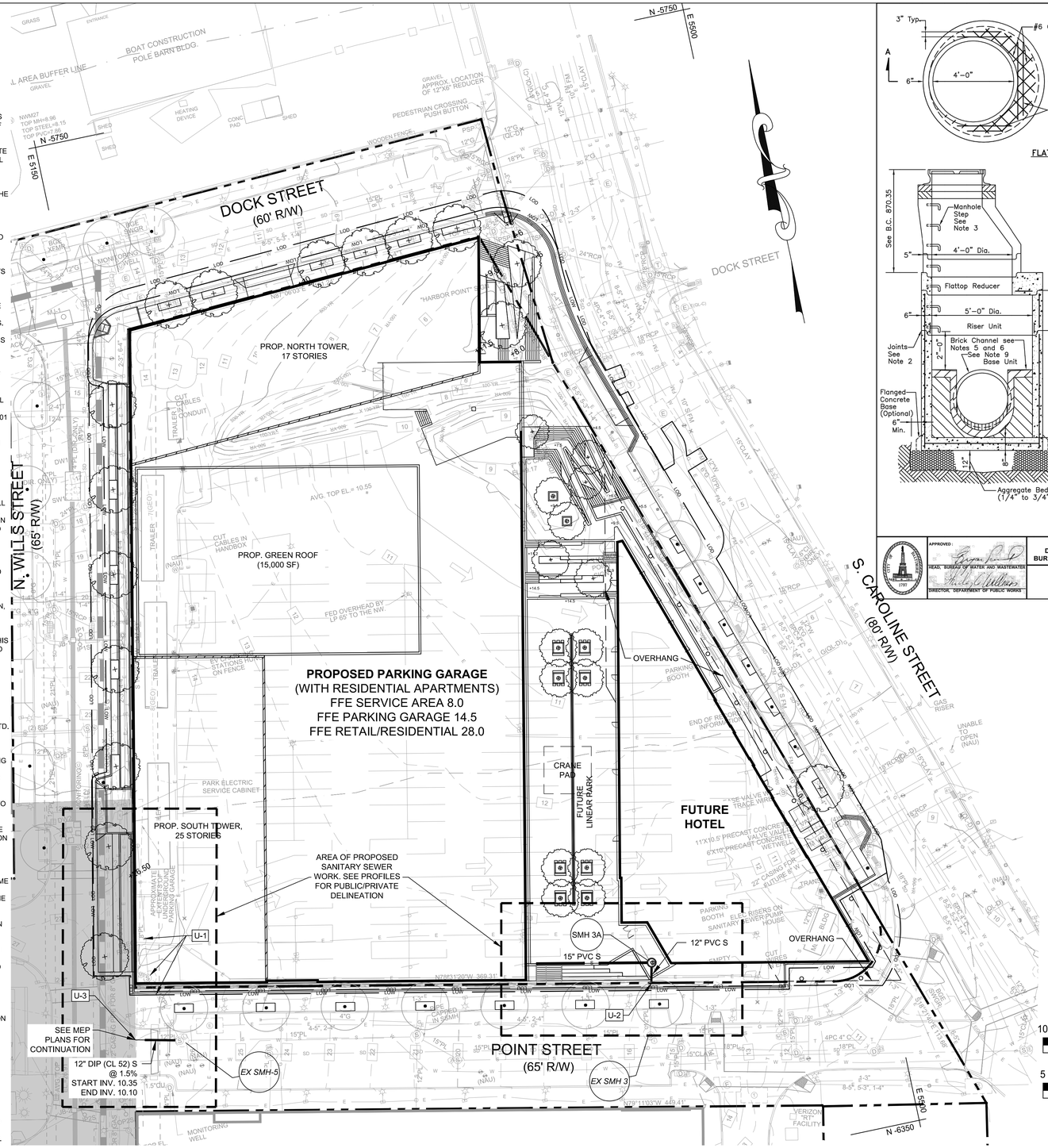
DESIGNED: RAF/FWS
DRAWN BY: JPS
CHECKED BY: CDK

BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
APPROVED BY:											
DATE APPROVED:											

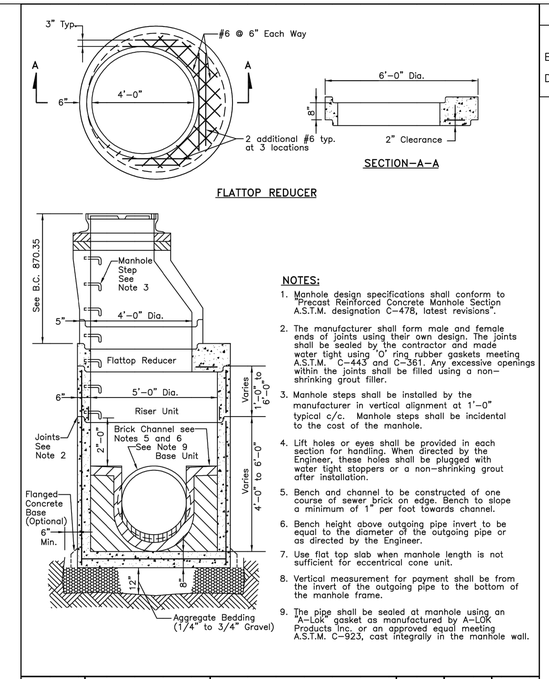
\\at-rkk.com\fs\CloudProjects\20\20203\9_JPSpecial\CADD\Revit\DA201 Water Details-Aug Aug 20, 2021 12:29pm jdheelon

SANITARY NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CITY OF BALTIMORE, DEPARTMENT OF PUBLIC WORKS, "SPECIFICATIONS FOR MATERIALS, HIGHWAYS, BRIDGES, UTILITIES AND INCIDENTAL STRUCTURES" (STANDARD SPECIFICATIONS) AND CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS.
2. EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FOR THE CONVENIENCE OF THE CONTRACTOR AND ARE NOT WARRANTED OF GUARANTEED BY THE CITY OR THE ENGINEER TO BE COMPLETE OR CORRECT. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS OWN SATISFACTION.
3. BEFORE DOING ANY DIGGING, NOTIFY THE FOLLOWING: "MISS UTILITY" AT 200-257-7777 (NOTIFY 3 DAYS PRIOR TO WORK). DEPT. OF TRANSPORTATION, STREET LIGHTING SECTION AT 410-396-4446 (NOTIFY 2 WEEKS PRIOR TO WORK). DEPT. OF TRANSPORTATION CONDUIT SECTION AT 410-396-1515 (NOTIFY 15 DAYS PRIOR TO WORK). VERIZON AT 800-837-4966 (NOTIFY 3 DAYS PRIOR TO WORK).
4. ALL CHANNELS IN MANHOLES MUST BE CONSTRUCTED TO CONFORM AS CLOSE AS POSSIBLE TO THE STANDARD CHANNEL CALLED FOR IN THE PROFILES.
5. INSTALL GRAVEL CRADLE FOR PVC PIPES IN ACCORDANCE WITH CITY SPECIFICATIONS SECTION 31 23 33.
6. ALL BACKFILL SHALL BE MECHANICALLY TAMPED.
7. ROADWAY PAVING REPLACEMENT SHALL BE DONE IN ACCORDANCE WITH CITY STANDARD SPECIFICATION SECTION 32 01 30.10.
8. ALL PVC PIPE SHALL CONFIRM TO ASTM D3034 SDR 35 FOR PVC COMPOUNDS. JOINTS FOR SDR 35 PVC PIPE SHALL BE THE PUSH-ON RUBBER GASKET TYPE IN ACCORDANCE WITH ASTM D-3212.
9. ONLY SANITARY SEWER WORK TO BE DONE IN THE PUBLIC RIGHT-OF-WAY WILL BE COVERED UNDER THIS AGREEMENT. ALL SANITARY SEWER CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY SHALL ALSO REQUIRE A PERMIT ISSUED BY THE BALTIMORE CITY DEPARTMENT OF TRANSPORTATION.
10. EXISTING SANITARY SEWER FLOWS AND ALL OTHER UTILITY SERVICES MUST BE MAINTAINED AT ALL TIMES.
11. THE DEPARTMENT OF TRANSPORTATION, TRANSPORTATION MAINTENANCE DIVISION, MAINTAINS STREET LIGHT POLES AND BGE MAINTAINS STREET LIGHT CABLES IN (W. WEST STREET). THIS LIGHTING SYSTEM MUST BE MAINTAINED AT ALL TIMES, CALL 410-396-5965, IF THESE ITEMS WILL BE DISTURBED.
12. ALL FLOWS TO "BACK RIVER" WASTEWATER TREATMENT PLANT.
13. LEAKAGE TEST: PROPOSED SANITARY SEWER SHALL BE TESTED IN ACCORDANCE WITH BALTIMORE CITY STD. SPEC. SECTION 33 31 00 3.7, GENERAL SERVICES RIGHT OF WAY SECTION.
14. SEE MECHANICAL/ELECTRICAL/PLUMBING DRAWINGS AND COORDINATE UTILITY SERVICE CONNECTION LOCATIONS AND ELEVATIONS. FURNISH AND INSTALL REDUCERS, ADAPTERS AND/OR CONNECTIONS AS REQUIRED TO TIE INTO M/E/P SYSTEMS.
15. THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF CONTRACT PRINTS ON WHICH HE SHALL NOTE, IN RED, THE HORIZONTAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND APPURTENANCES INSTALLED. THIS "AS-BUILT" SET OF PRINTS SHALL BECOME THE PROPERTY OF THE CITY OF BALTIMORE AT THE TERMINATION OF THE PROJECT.
16. SANITARY CONNECTIONS TO BE LAID ON A MINIMUM OF 2% GRADE.
17. CONDUCT CLOSED CIRCUIT TELEVISION (CCTV) INTERNAL INSPECTION OF ALL NEW SEWERS THAT HAVE BEEN TESTED AS NECESSARY TO DOCUMENT AND IDENTIFY SYSTEM DEFECTS.
18. PERFORM CCTV INSPECTION IN ACCORDANCE WITH "SPECIFICATION GUIDELINES. WASTEWATER COLLECTION SYSTEMS MAINTENANCE AND REHABILITATION" PREPARED BY THE NATIONAL ASSOCIATION OF SEWER SERVICE COMPANIES (NASSCO).
19. PROVIDE CCTV RECORDS, INCLUDING LOGS, PHOTOGRAPHS AND VIDEOTAPE/DVD RECORDS, TO THE ENGINEER AS A CONDITION FOR RECEIVING FINAL PAYMENT.
20. CONTRACTOR SHALL RETURN FINISHED GRADE TO PRE-CONSTRUCTED GRADE DURING UTILITY TRENCHING ACTIVITIES.
21. ALL DUCTILE IRON PIPE SHALL BE TH. CL 54 ANSI / AWWA C 151 / A21.51 WITH PUSH-ON JOINTINGS. CALCIUM ALUMINATE MORTAR LINING AND BITUMINOUS COATING.



SCALE: 1" = 30'

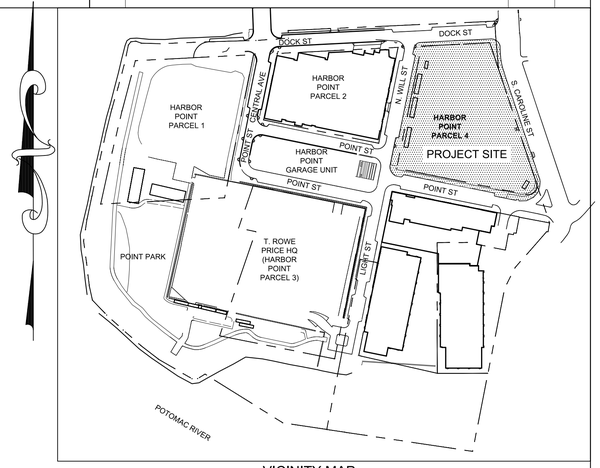


NOTES:

1. Manhole design specifications shall conform to "Precast Reinforced Concrete Manhole Section A.S.T.M. designation C-478, latest revisions".
2. The manufacturer shall form male and female ends of joints using their own design. The joints shall be sealed by the contractor and made water tight using 'O' ring rubber gaskets meeting A.S.T.M. C-443 and C-361. Any excessive openings within the joints shall be filled using a non-shrinking grout filler.
3. Manhole steps shall be installed by the manufacturer in vertical alignment at 1'-0" typical c/c. Manhole steps shall be incidental to the cost of the manhole.
4. Lift holes or eyes shall be provided in each section for handling. When directed by the Engineer, these holes shall be plugged with water tight stoppers or a non-shrinking grout after installation.
5. Bench and channel to be constructed of one course of sewer brick on edge. Bench to slope a minimum of 1" per foot towards channel.
6. Bench height above outgoing pipe invert to be equal to the diameter of the outgoing pipe or as directed by the Engineer.
7. Use flat top slab when manhole length is not sufficient for eccentrical cone unit.
8. Vertical measurement for payment shall be from the invert of the outgoing pipe to the bottom of the manhole frame.
9. The pipe shall be sealed at manhole using an "A-Lok" gasket as manufactured by A-LOK Products Inc. or an approved equal meeting A.S.T.M. C-923, cast integrally in the manhole wall.

APPROVED: HEAD, BUREAU OF WATER AND WASTEWATER	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED	REVISED	REVISED
		3 / 2008		
DIRECTOR, DEPARTMENT OF PUBLIC WORKS	60" DIAMETER PRECAST SANITARY MANHOLE FOR PIPE DIAMETERS UP TO 36"	STANDARD NO. BC 831.05		
		SCALE : NONE	SHEET 1 OF 5	

AS BUILT REVISIONS	REVISIONS			
BY:	NO.	DESCRIPTION	DATE	BY
DATE:				



VICINITY MAP

SCALE: 1" = 200'

200 100 0 200 400

SCALE: 1" = 200'

CONSTRUCTION NOTES

KEY U-1

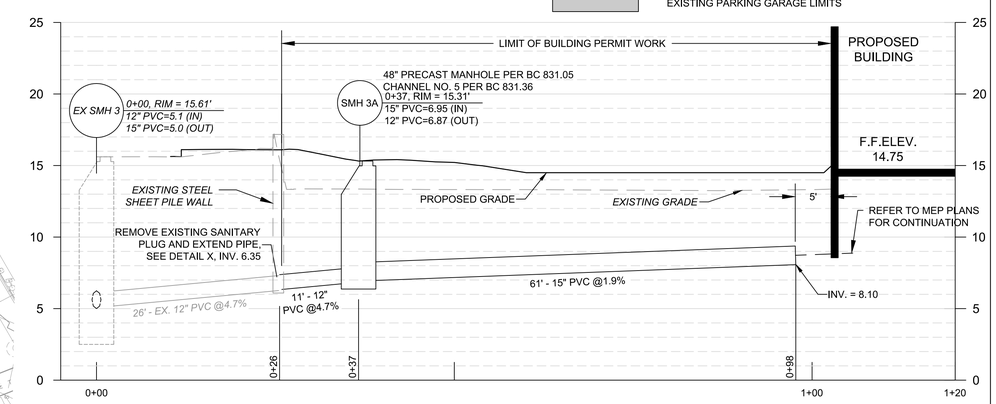
U-1. REMOVE EXISTING SANITARY SERVICE MANHOLE AND PIPING FOR EXELON BUILDING WITHIN THE BUILDING FOOTPRINT AND INSTALL STOPPER PLUG IN AT NORTH FACE OF THE EXISTING STEEL SHEET PILE WALL, SEE SPECS.

U-2. EXTEND EXISTING 12" PVC SANITARY STUB AT THE PROPERTY LINE

U-3. FOR RELOCATED EXELON SANITARY SERVICE LINE AND MANHOLE WITHIN GARAGE, SEE SHEETS DA310 - DA313

PROPOSED LEGEND

- LOD — LIMIT OF DISTURBANCE
- S — SANITARY SEWER LINE
- 48" PRECAST SANITARY MANHOLE PER BC 831.05
- EXISTING PARKING GARAGE LIMITS



SANITARY STUB EXTENSION

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

10 5 0 10 20

SCALE: 1" = 10'

5 2.5 0 5 10

SCALE: 1" = 5'

BILL OF MATERIALS*

QUANTITY	SIZE	DESCRIPTION
1	48"	BC 831.05 PRECAST SANITARY SEWER MANHOLE
11 LF	12"	DIP. CL 54
168 LF	8"	DIP. CL 54

* BILL OF MATERIALS IS PROVIDED FOR REVIEW AND APPROVAL BY CITY FORCES AND DOES NOT RELIEVE THE CONTRACTOR OF INSTALLING THE QUANTITIES NEEDED FOR THE COMPLETE INSTALLATION AT NO ADDITIONAL COST TO THE OWNER.

DIRECTOR, DEPARTMENT OF PUBLIC WORKS — DATE

CHIEF, OFFICE OF ENGINEERING & CONSTRUCTION — DATE

PRELIMINARY SUBMISSION

PROJECT DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

RK&K
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Responsive People | Creative Solutions — Contact: John d'Epagnier

WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

DESIGNED: RAF/FWS
DRAWN BY: JPS
CHECKED BY: CDK

BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
APPROVED BY:											
DATE APPROVED:											

HARBOR POINT PARCEL 4 HOLDINGS, LLC
OWNER/DEVELOPER/APPLICANT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

DEVELOPER AGREEMENT No.XXXX
HARBOR POINT PARCEL 4

1402 POINT ST

SANITARY PLAN

SCALE: AS SHOWN — DATE: AUGUST 20, 2021

WARD 03, SECTION 07, BLOCK 1815, LOT 004

SHEET 06 OF 13

DA300

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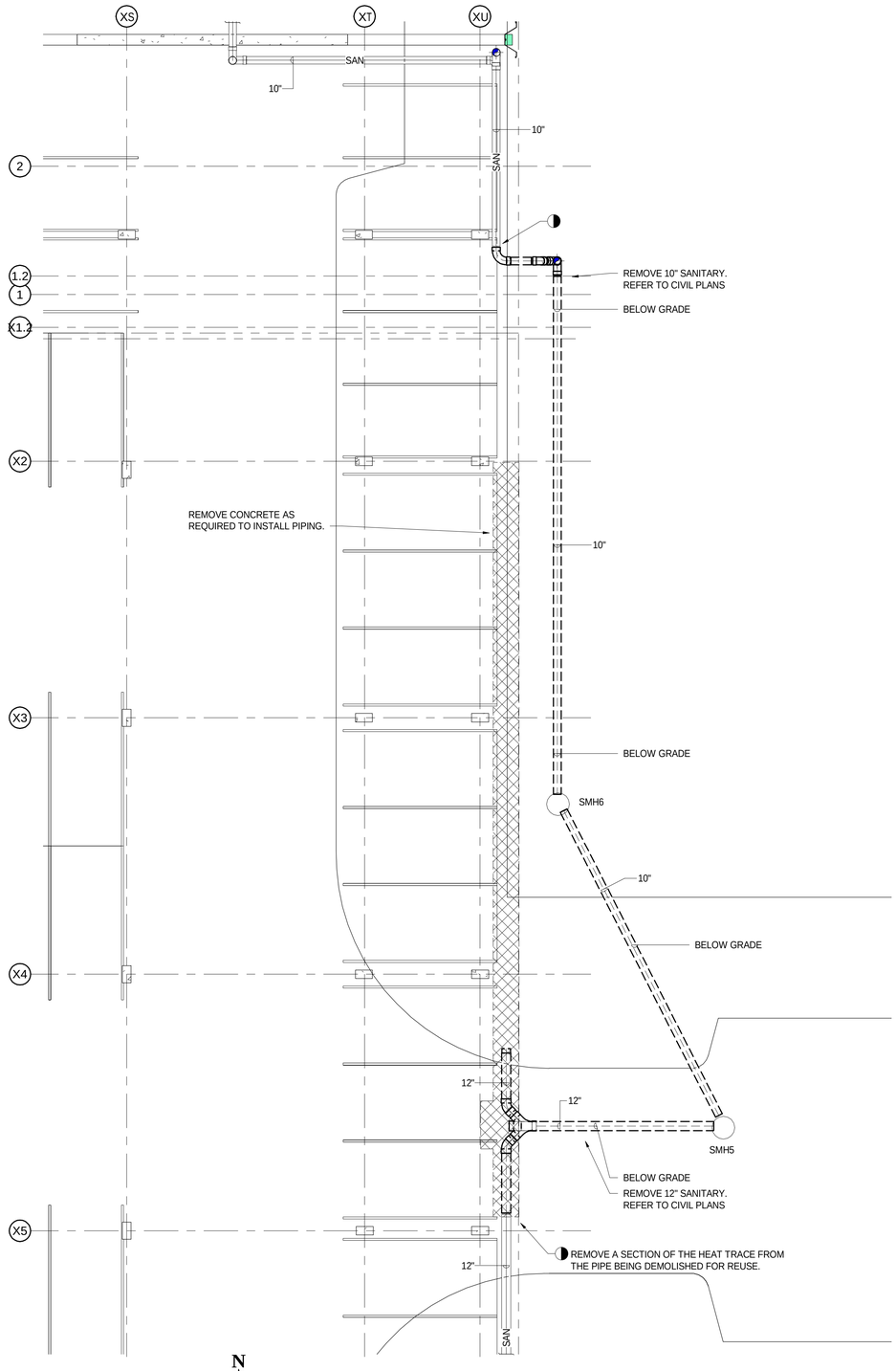
AS BUILT REVISIONS	REVISIONS			
	NO.	DESCRIPTION	DATE	BY
BY:				
DATE:				



N

1 PARTIAL EXELON GARAGE DEMOLITION PLAN

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

SYMBOL AND ABBREVIATION SCHEDULE

SYMBOL	ABBR.	DESCRIPTION
SAN	SAN	SANITARY
		FLOW DIRECTION
		CONNECT TO EXISTING
		POINT OF DISCONNECT
	<E>	EXISTING
		EXISTING TO REMAIN
		EXISTING TO BE REMOVED
	BL.	BELOW
	CO	ACCESSIBLE CLEANOUT
	CONT'D	CONTINUE OR CONTINUATION
	DN	DOWN
	FLR.	FLOOR
	DWG.	DRAWING

SPECIFICATIONS:

SUBMITTALS:
PROVIDE SUBMITTAL DATA FOR THE FOLLOWING
- SANITARY MANHOLE

SANITARY MANHOLE:
BASIS OF DESIGN: GILLESPIE PRECAST SANITARY MANHOLE
OPTIONAL 8" SLAB TOP
MANUFACTURED I.A.W. ASTM C-478. F'c=4500 PSI @ 28 DAYS.
48-INCH DIAMETER
36-INCHES TALL FROM TOP OF SLAB TO OUTLET INVERT 10.36-FEET ABOVE SEA LEVEL.
REINFORCING: ASTM A-185 AREA 0.12 INCHES / VERTICAL FOOT
MANHOLE JOINT SEALS: HAMILTON KENT O-RINGS
PIPE TO MANHOLE SEAL: STAR SEAL
BENCH AND CHANNEL CONSTRUCTED BY ONE COURSE OF SEWER BRICK ON EDGE IN THE FIELD

SANITARY DRAINAGE PIPING:
SOLID-WALL PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED JOINTS.
SOLID-WALL PVC PIPE: ASTM D 2665
PVC SOCKET FITTINGS: ASTM D 2665, ASTM D 3311
INSTALL DRAINAGE PIPING WITH MINIMUM 1/8-INCH PER FOOT DOWNWARD SLOPE IN DIRECTION OF FLOW.

SANITARY DRAINAGE PIPING INSULATION FOR ABOVE GROUND PIPING:
THICKNESS 1 INCH
INSULATION INSTALLED INDOORS: FLAME-SPREAD INDEX OF 25 OR LESS, AND SMOKE-DEVELOPED INDEX OF 50 OR LESS.
MINERAL-FIBER, PREFORMED PIPE INSULATION:
TYPE 1, 850 DEG F MATERIALS: MINERAL OR GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 547, TYPE 1, GRADE A, WITH FACTORY-APPLIED ASJ-SSL.
FACTORY-APPLIED JACKETS:
ASJ: WHITE, KRAFT-PAPER, FIBERGLASS-REINFORCED SCRIM WITH ALUMINUM-FOIL BACKING; COMPLYING WITH ASTM C 1136, TYPE 1.
FIELD-APPLIED JACKETS: COMPLY WITH ASTM C 921, TYPE 1, UNLESS OTHERWISE INDICATED.
PVC JACKET: HIGH-IMPACT-RESISTANT, UV-RESISTANT PVC COMPLYING WITH ASTM D 1784, CLASS 16354-C.

DA310

HARBOR POINT PARCEL 4 HOLDINGS, LLC
OWNER/DEVELOPER/APPLICANT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

DEVELOPER AGREEMENT No.XXXX

HARBOR POINT PARCEL 4

1402 POINT ST

PARTIAL EXELON GARAGE SANITARY PIPING DEMOLITION PLAN

SCALE: AS SHOWN DATE: AUGUST 20, 2021

WARD 03, SECTION 07, BLOCK 1815, LOT 004 **SHEET** 7 **OF 13**

DIRECTOR, DEPARTMENT OF PUBLIC WORKS DATE

DIRECTOR, DEPARTMENT OF TRANSPORTATION DATE

INCOMPLETE DRAWING,
SUBJECT TO FURTHER
DEVELOPMENT AND OR CHANGES

DATE
08/13/21

PROGRESS PRINT

PRELIMINARY
SUBMISSION

PROJECT DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

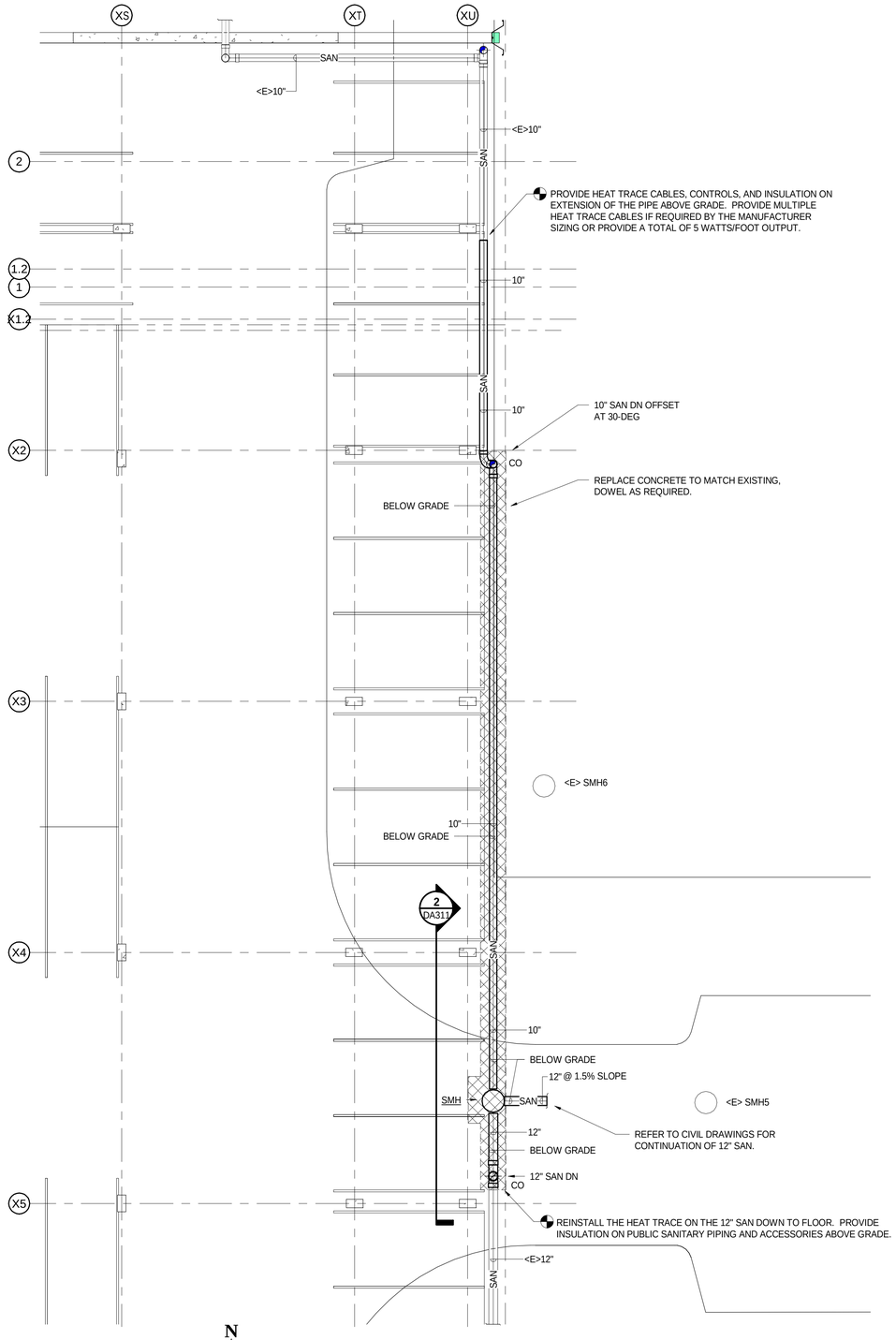
jdb engineering, inc.
Pennsylvania Office
P.O. Box 22160
York, PA 17402
717.757.5602
Maryland Office
913 Ridgebrook Road
Suite 216
Sparks, MD 21152
443.595.8181
www.jdbengineering.com

WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
APPROVED BY:											
DATE APPROVED:											

DESIGNED: T.E.L.
DRAWN BY: T.E.L.JR.
CHECKED BY: T.E.L.

AS BUILT REVISIONS	REVISIONS			
	NO.	DESCRIPTION	DATE	BY
BY:				
DATE:				



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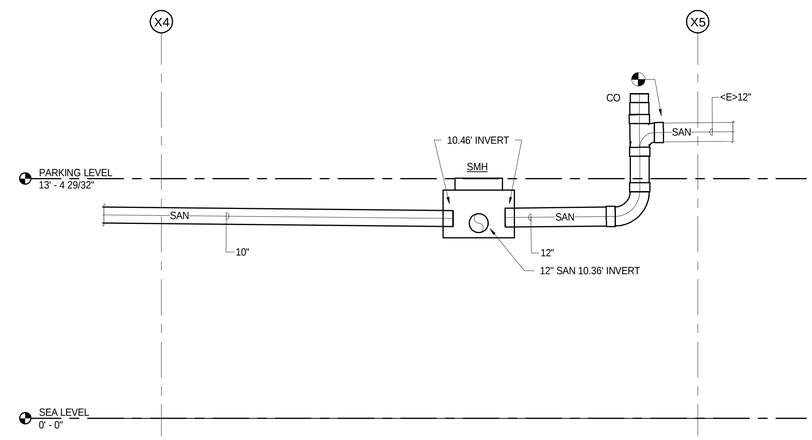
1 PARTIAL EXELON GARAGE PLAN

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



2 SECTION

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

DA311

HARBOR POINT PARCEL 4 HOLDINGS, LLC

OWNER/DEVELOPER/APPLICANT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

DEVELOPER AGREEMENT No.XXXX

HARBOR POINT PARCEL 4

1402 POINT ST

PARTIAL EXELON GARAGE SANITARY PIPING PLAN

DIRECTOR, DEPARTMENT OF PUBLIC WORKS DATE

DIRECTOR, DEPARTMENT OF TRANSPORTATION DATE

INCOMPLETE DRAWING, SUBJECT TO FURTHER DEVELOPMENT AND OR CHANGES

DATE 08/13/21

PROGRESS PRINT

PRELIMINARY SUBMISSION

PROJECT DATUM:

- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

jdb engineering, inc.

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Sparks, MD 21152
443.595.8181

www.jdbengineering.com

SCALE: AS SHOWN DATE: AUGUST 20, 2021

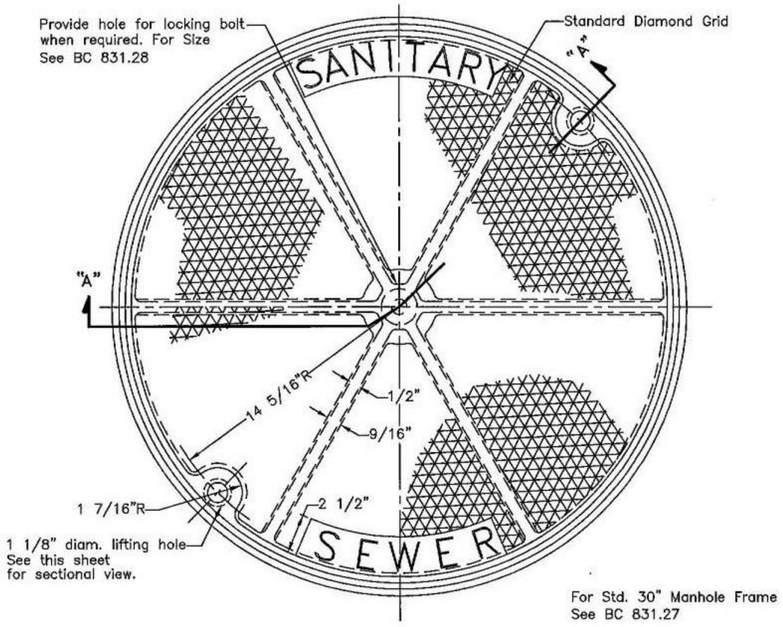
WARD 03, SECTION 07, BLOCK 1815, LOT 004 **SHEET** 8 **OF 13**

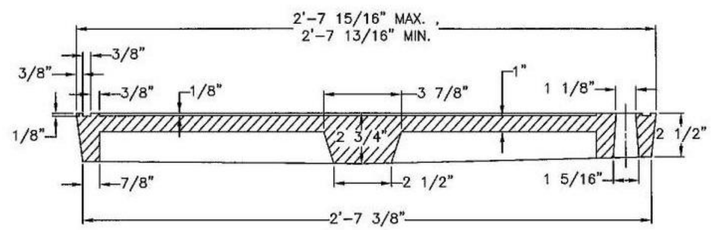
WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
APPROVED BY:											
DATE APPROVED:											

DESIGNED: T.E.L.
DRAWN BY: T.E.L.JR.
CHECKED BY: T.E.L.

AS BUILT REVISIONS	REVISIONS			
	NO.	DESCRIPTION	DATE	BY
BY:				
DATE:				

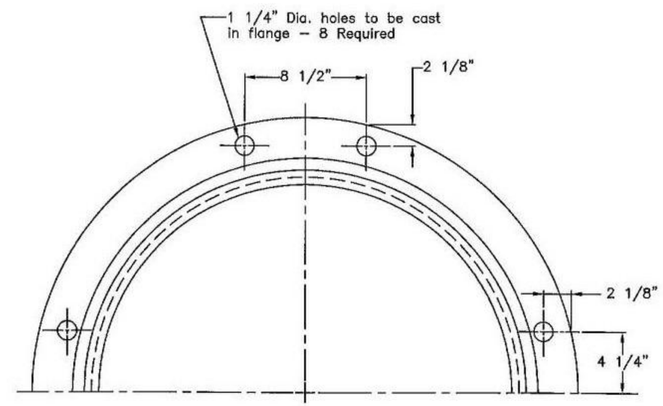


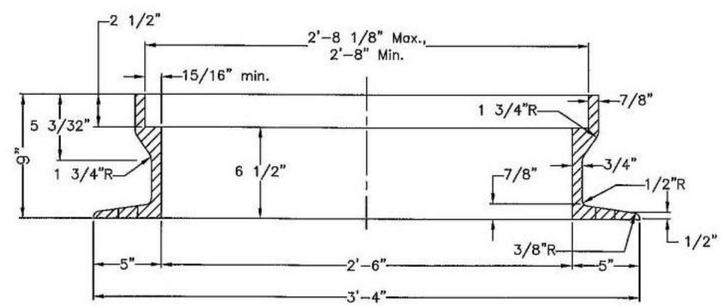


1 3/4" Standard Flat Face Gothic No.3 Letters, 1/8" Deep.

SECTION "A-A"

APPROVED: HEAD, BUREAU OF WATER AND WASTEWATER / DIRECTOR, DEPARTMENT OF PUBLIC WORKS	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED	REVISED	REVISED
		3 / 2008		
	STANDARD SANITARY 30 IN. MANHOLE COVER	STANDARD NO. BC 831.26		
		SCALE : NONE	SHEET 1 OF 1	

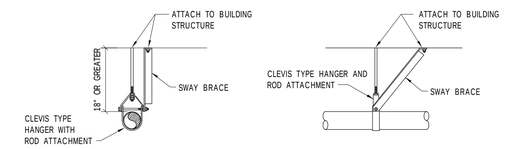




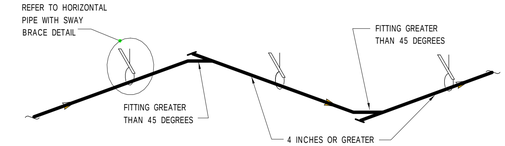
For 30" Lock Type Frame See BC 831.28

For Std. 30" Manhole Cover See BC 831.26

APPROVED: HEAD, BUREAU OF WATER AND WASTEWATER / DIRECTOR, DEPARTMENT OF PUBLIC WORKS	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED	REVISED	REVISED
		3 / 2008		
	STANDARD 30 IN. MANHOLE FRAME	STANDARD NO. BC 831.27		
		SCALE : NONE	SHEET 1 OF 1	



1 HORIZONTAL PIPE WITH SWAY BRACE DETAIL
SCALE: 1/8" = 1'-0"



PROVIDE SWAY BRACING ON ALL PIPE RUNS 4 INCHES OR GREATER WHERE PIPING IS SUSPENDED 18 INCHES OR GREATER FROM BUILDING STRUCTURE OR WHERE PIPING CHANGE IN DIRECTION IS GREATER THAN 45 DEGREES.

2 TYPICAL RESTRAINT JOINT FITTINGS DETAIL
SCALE: 1/8" = 1'-0"

DA312

HARBOR POINT PARCEL 4 HOLDINGS, LLC

OWNER/DEVELOPER/APPLICANT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

DEVELOPER AGREEMENT No.XXXX

HARBOR POINT PARCEL 4

1402 POINT ST

SANITARY DETAILS

DIRECTOR, DEPARTMENT OF PUBLIC WORKS DATE

DIRECTOR, DEPARTMENT OF TRANSPORTATION DATE

WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
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DESIGNED: T.E.L.
DRAWN BY: T.E.L.JR.
CHECKED BY: T.E.L.

INCOMPLETE DRAWING, SUBJECT TO FURTHER DEVELOPMENT AND OR CHANGES

DATE 08/13/21

PROGRESS PRINT

PRELIMINARY SUBMISSION

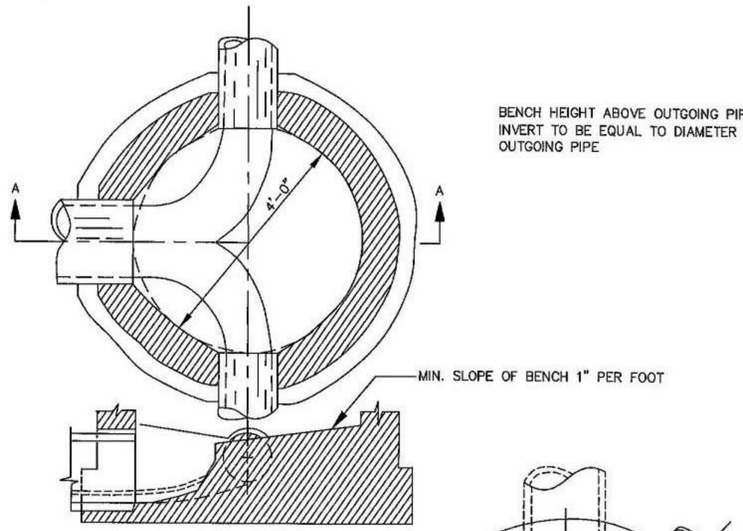
PROJECT DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

jdb engineering, inc.
Pennsylvania Office
P.O. Box 22160
York, PA 17402
717.757.5602
Maryland Office
913 Ridgebrook Road
Suite 216
Sparks, MD 21152
443.595.8181
www.jdbengineering.com

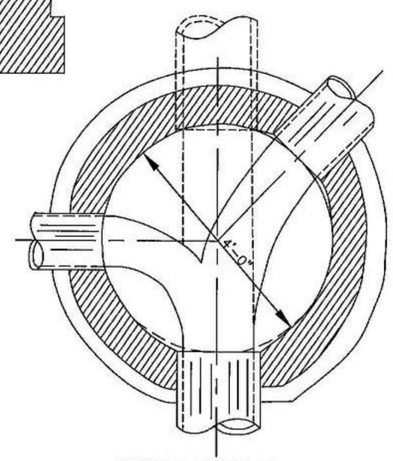
SCALE: AS SHOWN DATE: AUGUST 20, 2021

WARD 03, SECTION 07, BLOCK 1815, LOT 004

AS BUILT REVISIONS	REVISIONS			
	NO.	DESCRIPTION	DATE	BY
BY:				
DATE:				

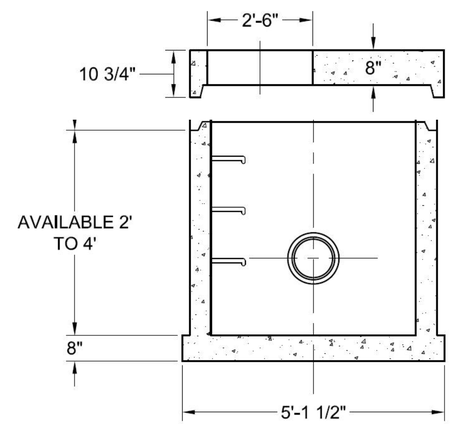


SECTION A–A
STANDARD CHANNEL NO. 1



STANDARD CHANNEL NO. 2

Optional 8" Slab Top
(for shallow and pipe close to grade)



NOTES:

1. Manhole design specifications shall conform to "Precast Reinforced Concrete Manhole Section A.S.T.M. designation C–478, latest revisions".
2. The manufacturer shall form male and female ends of joints using their own design. The joints shall be sealed by the contractor and made water tight using 'O' ring rubber gaskets meeting A.S.T.M. C–443 and C–361. Any excessive openings within the joints shall be filled using a non–shrinking grout filler.
3. Manhole steps shall be installed by the manufacturer in vertical alignment at 1'–0" typical c/c. Manhole steps shall be incidental to the cost of the manhole.
4. Lift holes or eyes shall be provided in each section for handling. When directed by the Engineer, these holes shall be plugged with water tight stoppers or a non–shrinking grout after installation.
5. Bench and channel to be constructed of one course of sewer brick on edge. Bench to slope a minimum of 1" per foot towards channel.
6. Bench height above outgoing pipe invert to be equal to the diameter of the outgoing pipe or as directed by the Engineer.
7. Use flat top slab when manhole length is not sufficient for eccentrical cone unit.
8. Vertical measurement for payment shall be from the invert of the outgoing pipe to the bottom of the manhole frame.
9. The pipe shall be sealed at manhole using an "A–Lok" gasket as manufactured by A–LOK Products Inc. or an approved equal meeting A.S.T.M. C–923, cast integrally in the manhole wall.

APPROVED:	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED	REVISED	REVISED
HEAD, BUREAU OF WATER AND WASTEWATER		3 / 2008		
DIRECTOR, DEPARTMENT OF PUBLIC WORKS	TYPICAL MANHOLE CHANNELS STANDARD CHANNEL NO. 1 STANDARD CHANNEL NO. 2	STANDARD NO. BC 831.35		
		SCALE: NONE	SHEET 1 OF 1	

DA313

HARBOR POINT PARCEL 4 HOLDINGS, LLC
OWNER/DEVELOPER/APPLICANT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

DEVELOPER AGREEMENT No.XXXX

HARBOR POINT PARCEL 4

1402 POINT ST

SANITARY DETAILS

DIRECTOR, DEPARTMENT OF PUBLIC WORKS DATE

DIRECTOR, DEPARTMENT OF TRANSPORTATION DATE

WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

DESIGNED: T.E.L.
DRAWN BY: T.E.L.JR.
CHECKED BY: T.E.L.

BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
APPROVED BY:											
DATE APPROVED:											

INCOMPLETE DRAWING,
SUBJECT TO FURTHER
DEVELOPMENT AND OR CHANGES

DATE
08/13/21

PROGRESS PRINT

PRELIMINARY
SUBMISSION

PROJECT DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
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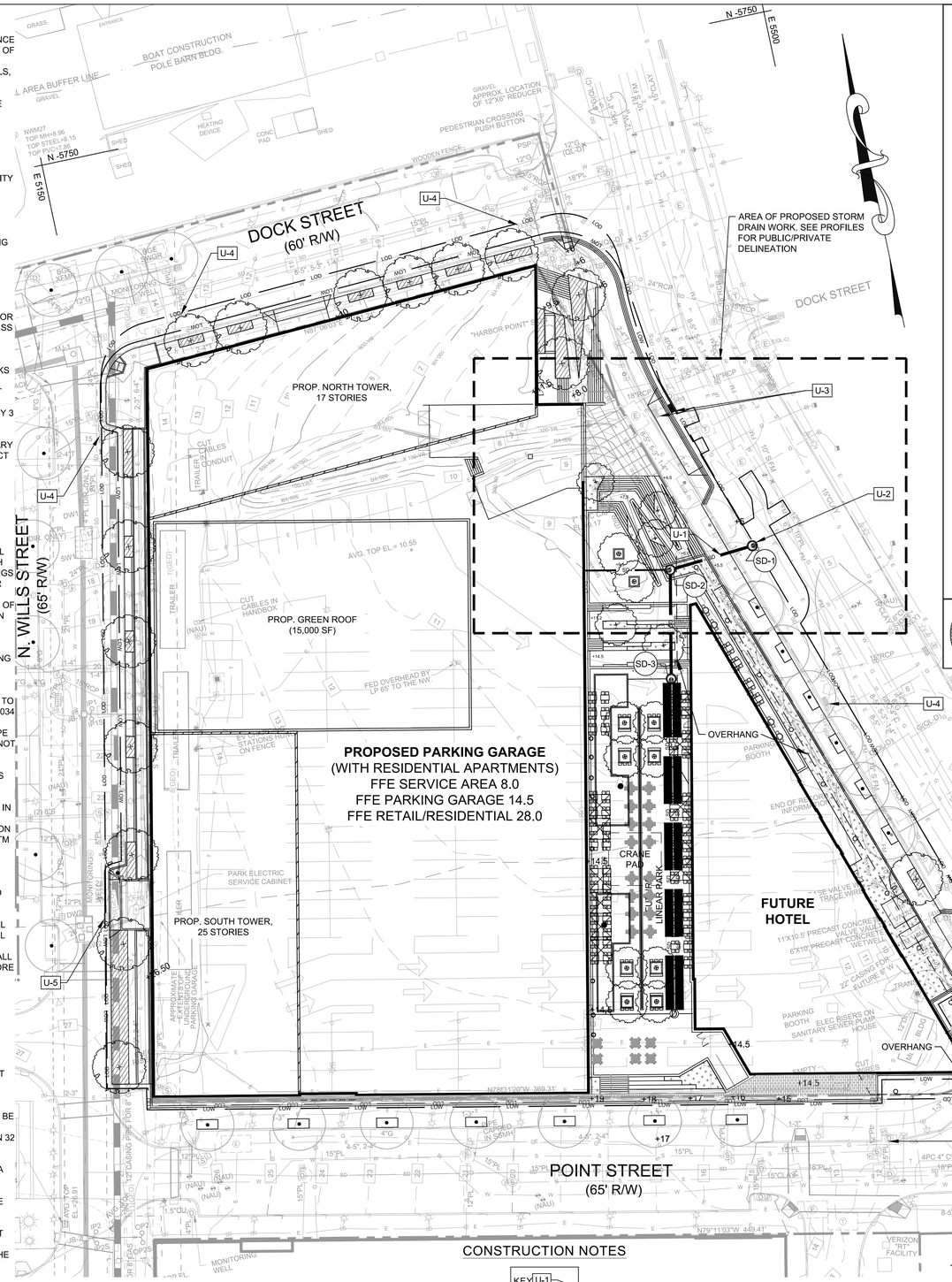
SCALE: AS SHOWN DATE: AUGUST 20, 2021

WARD 03, SECTION 07, BLOCK 1815, LOT 004

SHEET 10 **OF 13**

STORM DRAIN NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE CITY OF BALTIMORE, DEPARTMENT OF PUBLIC WORKS, "SPECIFICATIONS FOR MATERIALS, HIGHWAYS, BRIDGES, UTILITIES, AND INCIDENTAL STRUCTURES" (STANDARD SPECIFICATION) AND CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS.
2. EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FOR THE CONVENIENCE OF THE CONTRACTOR AND ARE NOT WARRANTED OR GUARANTEED BY THE CITY OR THE ENGINEER TO BE COMPLETE OR CORRECT. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS OWN SATISFACTION.
3. SEE MECHANICAL/ ELECTRICAL/ PLUMBING (MEP) PLANS AND COORDINATE UTILITY SERVICE CONNECTION LOCATIONS AND ELEVATIONS. FURNISH AND INSTALL ADAPTERS AND/OR CONNECTIONS AS REQUIRED TO TIE INTO MEP SYSTEMS.
4. BEFORE DOING ANY DIGGING,CONTRACTOR SHALL NOTIFY THE FOLLOWING: - "MISS UTILITY" AT 800-257-7777 (NOTIFY 3 DAYS PRIOR TO WORK) - DEPT. OF TRANSPORTATION, STREET LIGHTING SECTION AT 410-396-5965 (NOTIFY 2 WEEKS PRIOR TO WORK) - DEPT. OF TRANSPORTATION, CONDUIT SECTION AT 410-396-6919 (NOTIFY 15 DAYS PRIOR TO WORK) - VERIZON AT 800-837-4966 (NOTIFY 3 DAYS PRIOR TO WORK).
5. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SUPPORT AND PROTECT ALL EXISTING UTILITIES WHEN WORKING ADJACENT TO OR CROSSING EXISTING UTILITIES. ANY DAMAGES TO EXISTING FACILITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
6. DEVELOPER'S AGREEMENT: ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS FOR THE DEVELOPER'S AGREEMENT FOR THIS PROJECT. CONTRACTOR SHALL OBTAIN PERMIT FROM THE DEPARTMENT OF TRANSPORTATION FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
7. ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS 4, ASTM C76 WITH 'O' RING RUBBER GASKET, ASTM C443, UNLESS NOTED OTHERWISE.
8. ALL POLYVINYL CHLORIDE (PVC) PIPE UP TO 27" IN SIZE SHALL CONFORM TO ASTM D3034 SDR 35. JOINTS FOR SDR 35 PVC PIPE SHALL BE PUSH-ON RUBBER GASKET TYPE IN ACCORDANCE WITH ASTM D3212. DO NOT INSTALL PVC PIPE AND FITTINGS WITHIN FROST LINE. FOR THE EXCEPTIONS TO PIPES ABOVE THE FROST LINE, THE PIPES SHALL BE CONCRETE ENCASED.
9. ALL POLYVINYL CHLORIDE (PVC) PIPE 30" IN SIZE AND LARGER SHALL BE AWWA C905, DR41, CONFORM TO ASTM D1784. PUSH-ON GASKET JOINTS SHALL CONFORM TO ASTM F477 AND D3139.
10. ALL CHANNELS IN MANHOLES SHALL BE CONSTRUCTED TO CONFORM TO THE STANDARD MANHOLE CHANNELS CALLED FOR IN THE PROFILES.
11. GRAVEL CRADLE IS REQUIRED UNDER ALL PIPING EXCEPT INLET CONNECTIONS. ALL BACKFILL SHALL BE MECHANICALLY TAMPED. TRENCHING AND BACKFILL SHALL BE DONE IN ACCORDANCE WITH BALTIMORE CITY SPECIFICATION SECTION 31 23 33.
12. ALL BACKFILL SHALL BE MECHANICALLY TAMPED.
13. ALL STATIONS AND OFFSETS FOR STRUCTURES ARE SHOWN AT THE CENTERLINE OF THE STRUCTURE
14. CONTRACTOR SHALL PREVENT SEDIMENT FROM ENTERING CITY STORM DRAIN DURING CONSTRUCTION.
15. ROADWAY PAVING REPLACEMENT SHALL BE DONE IN ACCORDANCE WITH BALTIMORE CITY STANDARD SPECIFICATION SECTION 32 01 30.10.
16. DUCTILE IRON PIPE, TH. CL.54 ANSI/AWWA C151/A21.51. DUCTILE IRON FITTINGS MEETING ANSI/AWWA C11/A21.10 WITH PUSH-ON JOINTINGS UNLESS OTHERWISE NOTED.
17. THE CONTRACTOR SHALL VIDEO INSPECT THE NEW STORM DRAINS AND SUBMIT A DVD/CD OF THE VIDEO INSPECTION TO THE STORM WATER ENGINEERING OFFICE.
18. PROVIDE AS-BUILT DRAWINGS IN ACCORDANCE TO THE PROCEDURES PROVIDED BY THE STORM WATER ENGINEERING OFFICE.



30 15 0 30 60

SCALE: 1" = 30'

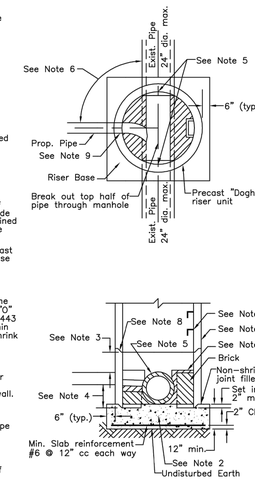
CONSTRUCTION NOTES

KEY U-1

U-1. PRIVATE STORM WATER OUTLET DRAIN
U-2. 48" PRECAST DOGHOUSE MANHOLE PER BC 831.07
U-3. REMOVE EXISTING INLET AND INSTALL MODIFIED TYPE 'S' DGT INLET, SEE DETAILS ON SHEET XXX.
U-4. MAINTAIN IN SERVICE THE EXISTING DRAINAGE INLET
U-5. POSSIBLE INLET MODIFICATIONS TO ACCOMMODATE GARAGE APRON AND THE EXISTING GARAGE ROOF SLAB.

NOTES:

1. Manhole design specifications shall conform to "Precast Reinforced Concrete Manhole Section A.S.T.M. designation C-478, latest revisions".
2. Manhole base shall be Mix No. 3 (3,500 psi) poured-in-place concrete.
3. Provide 12" minimum clearance from top of highest pipe opening to upper riser joint.
4. Provide 6" minimum clearance from incoming pipe opening to bottom of doghouse unit.
5. Minimum 1" clearance shall be maintained between existing pipes and precast doghouse pipe openings. Openings shall be grouted with non-shrink grout joint filler.
6. Locate centerline of proposed incoming pipe a maximum of 90 degrees from existing incoming pipe, on either side of manhole. In all cases, a minimum 1' wide section of manhole wall shall be maintained between pipe openings in doghouse base unit.
7. See standard detail BC-831.04 for precast sanitary manhole risers use with doghouse riser shown.
8. The manufacturer shall form male and female ends of joints using their own designs. The joints shall be sealed by the contractor and made water tight using "O"-ring rubber gaskets meeting A.S.T.M. C-443 and C-361. Any excessive openings within the joints shall be filled using a non-shrink grout filler.
9. The proposed pipe shall be sealed at manhole using an "A-LOK" gasket as manufactured by A-LOK Products Inc. or an approved equal meeting A.S.T.M. C-923, cast integrally in the manhole wall.
10. Ladder rungs shall be supplied and installed by the manufacturer in vertical alignment at 1'-0" typical c/c. Rung type shall be in accordance with Standard B.C.-831.31. Ladder rungs shall be incidental to the cost of the manhole.
11. Bench and channel to be constructed of one course of sewer brick on edge. Bench to slope a minimum of 1" per foot towards channel.



APPROVED: HEAD, BUREAU OF WATER AND WASTEWATER / DIRECTOR, DEPARTMENT OF PUBLIC WORKS	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED 3 / 2008	REVISED / REVISED
	48" DIAMETER PRECAST "DOGHOUSE" RISER FOR PIPE DIAMETERS UP TO 24" TITLE LINE 4	STANDARD NO. BC 831.07	
		SCALE : NONE	SHEET 1 OF 1

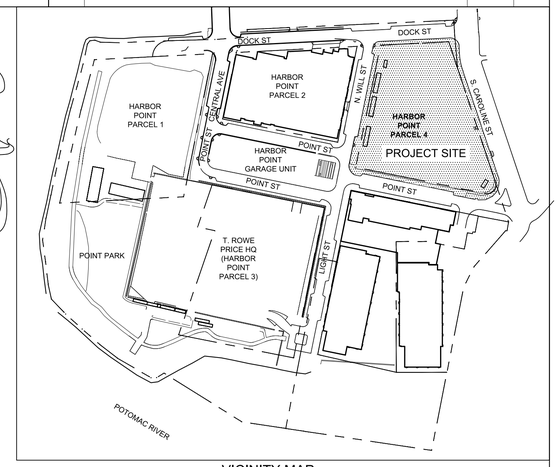
AS BUILT REVISIONS

BY: _____

DATE: _____

REVISIONS

NO.	DESCRIPTION	DATE	BY



VICINITY MAP

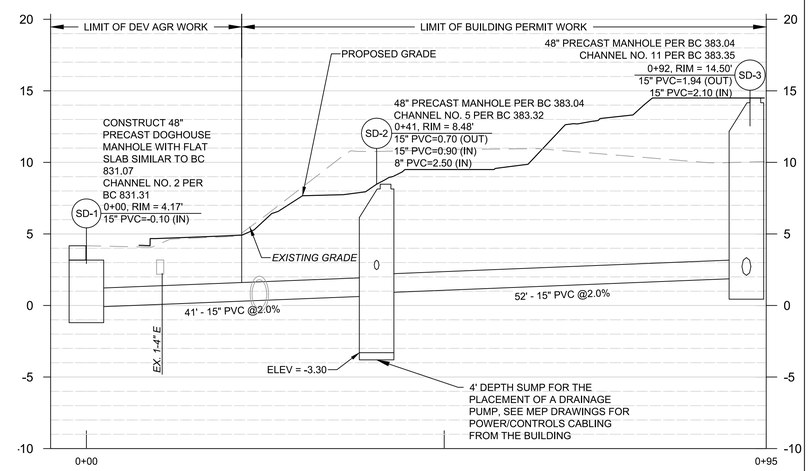
SCALE: 1" = 200'

200 100 0 200 400

SCALE: 1" = 200'

PROPOSED LEGEND

- LOD — LIMIT OF DISTURBANCE
- SD — STORM DRAIN LINE
- DOGHOUSE MANHOLE PER BC 831.07
- STORM DRAIN INLET



10 5 0 10 20

SCALE: 1" = 10'

5 2.5 0 5 10

SCALE: 1" = 5'

STORM DRAIN CONNECTION

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

DA400

BILL OF MATERIALS*

QUANTITY	SIZE	DESCRIPTION
1	48"	BC 831.07 DOGHOUSE MANHOLE
25 LF	18"	RCP

* BILL OF MATERIALS IS PROVIDED FOR REVIEW AND APPROVAL BY CITY FORCES AND DOES NOT RELIEVE THE CONTRACTOR OF INSTALLING THE QUANTITIES NEEDED FOR THE COMPLETE INSTALLATION AT NO ADDITIONAL COST TO THE OWNER.

DIRECTOR, DEPARTMENT OF PUBLIC WORKS DATE

CHIEF, OFFICE OF ENGINEERING & CONSTRUCTION DATE

PRELIMINARY SUBMISSION

PROJECT DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

RK&K
P: 410.728.2900
700 E. Pratt Street, Suite 500 | Baltimore, MD 21202
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions
Contact: John d'Epagnier

HARBOR POINT PARCEL 4 HOLDINGS, LLC
OWNER/DEVELOPER/APPLICANT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

DEVELOPER AGREEMENT No.XXXX
HARBOR POINT PARCEL 4

1402 POINT ST

STORM DRAIN PLAN

SCALE: AS SHOWN DATE: AUGUST 20, 2021

WARD 03, SECTION 07, BLOCK 1815, LOT 004 **SHEET 11 OF 13**

WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

DESIGNED: RAF/FWS
DRAWN BY: JPS
CHECKED BY: CDK

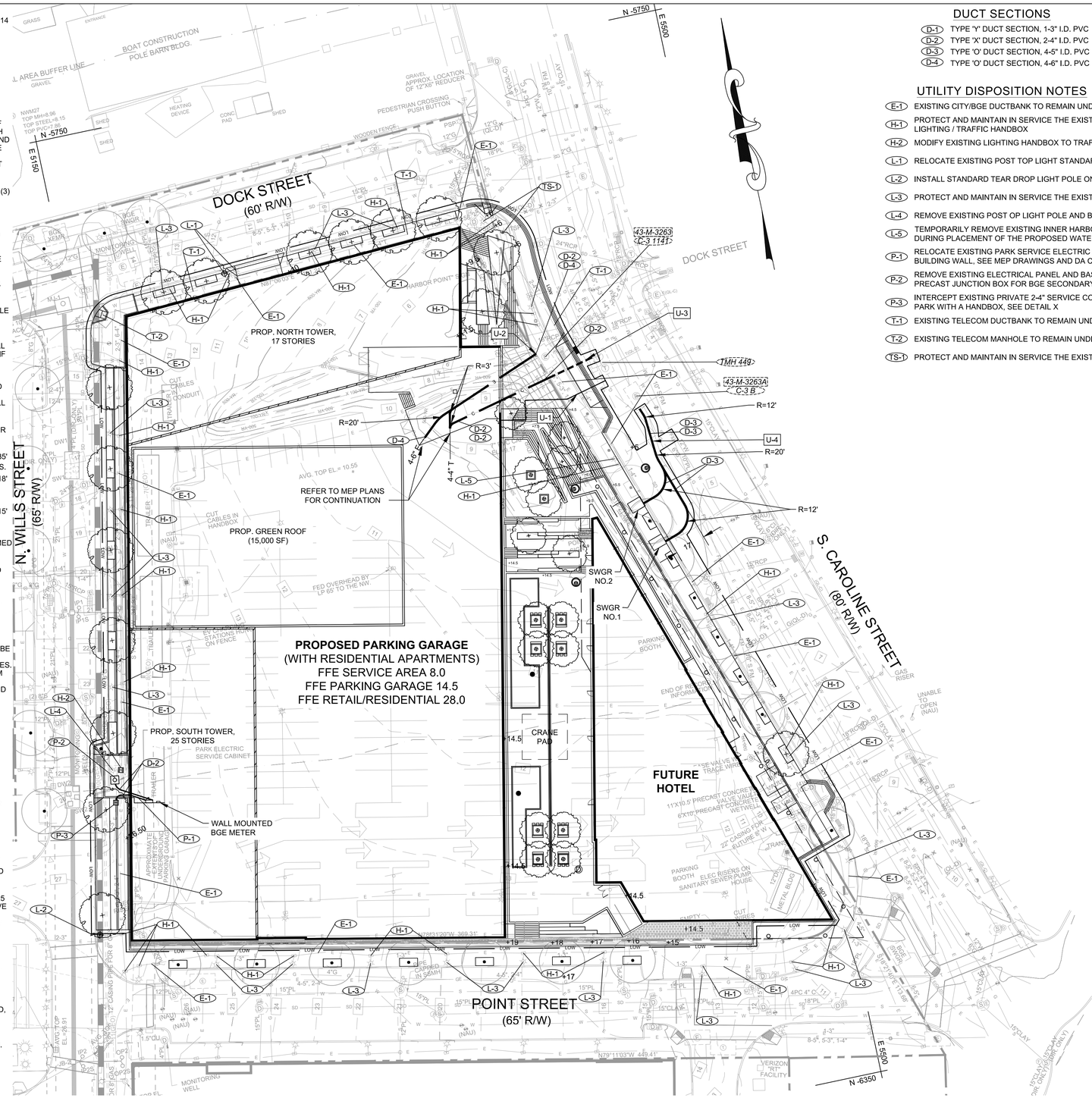
BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
APPROVED BY:											
DATE APPROVED:											

\\rkk.com\RK\Cloud\Projects\20\20\20335_JPSpecialCADD\Revit\3400 Storm Drain Plan.dwg Aug 20, 2021 12:32pm jahedman

CONDUIT NOTES:

1. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST 14 DAYS PRIOR TO STARTING WORK.
   a. MISS UTILITY 800-257-7777
   b. STREET LIGHT MAINTENANCE 410-396-1311
   c. CONDUIT MAINTENANCE 410-396-1515
2. CONDUITS EXIST WITHIN THE WORK AREA. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXCAVATING AND INSTALLING NEW UTILITIES. IN THE EVENT PORTIONS OF THE EXISTING BALTIMORE CITY CONDUIT SYSTEM ARE DAMAGED AS A RESULT OF PROJECT CONSTRUCTION, REPAIR OR REPLACEMENT OF THE DAMAGED SECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF BALTIMORE CITY STANDARDS AND SPECIFICATIONS. FOR SPLIT DUCT REFER TO BALTIMORE CITY DETAIL G0Z.OR-4. REPAIRS WILL BE AT THE CONTRACTOR'S EXPENSE AND APPROVED BY A CONDUIT INSPECTOR.
3. CONTRACTOR TO NOTIFY ALL CONDUIT LESSEES THREE (3) DAYS PRIOR TO PERFORMING WORK. CONTACT THE CONDUITS SECTION AT 410-396-6914 TO GET THIS INFORMATION.
4. ALL DUCTS AND MANHOLES MUST BE CONSTRUCTED TO CONFORM AS CLOSE AS POSSIBLE TO THE STANDARD DUCT FORMATION CALLED IN PROFILES. ALL DUCT BANK CONDUITS SHALL BE DB-120 WITH A WIRE TEMPERATURE RATING OF 90 DEGREES PER BALTIMORE CITY SPECIFICATION (26 07 01.1) EXCEPT ON BRIDGES (SCHEDULE 40) AND WHERE THE DUCT BANK CROSSES A STEAM LINE (FIBERGLASS.)
5. ALL DUCTS MUST LEAVE AT 90 DEGREES TO THE MANHOLE WALL AND WILL PROCEED AT THE ANGLE FOR THE MINIMUM OF 5'-0" UNLESS OTHERWISE SHOWN.
6. HORIZONTAL BENDS AND SWEEPS IN THE CONDUIT SHALL BE A MINIMUM RADIUS OF 35' OR AS OTHERWISE NOTED IF DUCT SECTIONS ARE TO BE INSTALLED WITH A RADIUS LESS THAN 35', THE DUCT SHALL BE COMPOSED OF PREFORMED FACTORY-FABRICATED SEGMENTAL SECTIONS WITH RADII GREATER THAN 3', AND APPROVED BY CONDUIT INSPECTION AS PER THE BALTIMORE SPECIFICATIONS (26 07 01.04) ALL VERTICAL BENDS SHALL HAVE A MINIMUM RADIUS OF 20'
7. HORIZONTAL BENDS AND SWEEPS IN THE SECONDARY OR UNIFORM SIZE DUCT SYSTEM SHALL BE AS FOLLOW UNLESS NOTED OTHERWISE ON THE PLANS.
   a. FOR 5" ID PVC: ALL SWEEPS SHALL HAVE A MINIMUM 35' RADIUS. ALL BENDS SHALL HAVE A MINIMUM 5' RADIUS.
   b. FOR 4" ID PVC: ALL SWEEPS SHALL HAVE A MINIMUM 18' RADIUS. ALL BENDS SHALL HAVE A MINIMUM 3.5' RADIUS.
   c. FOR 3" ID PVC: ALL SWEEPS SHALL HAVE A MINIMUM 15' RADIUS. ALL BENDS SHALL HAVE A MINIMUM 1.5' RADIUS.

   THE CONTRACTOR SHALL USE ONLY FACTORY-PREFORMED BENDS.
8. PLUG CONDUIT OPEN ENDS. FOR DUCT PLUGS REFER TO BALTIMORE CITY DETAIL 802.03-3.
9. FULL TRENCH COMPACTION OF SUITABLE BACKFILL MATERIAL WILL BE REQUIRED FOR ALL PROPOSED DUCT BANKS.
10. THE DUCT SECTION SHALL HAVE A MINIMUM COVER OF THREE FEET SIX INCHES (3'-6") UNDER ROADWAYS AND FOUR (4'-0") UNDER SIDEWALKS. THE CONTRACTOR MAY BE REQUIRED TO ADJUST THE DEPTH OF THE CONDUIT TO AVOID CONFLICTS WITH EXISTING OR PROPOSED UTILITIES. WHERE IT IS NOT POSSIBLE TO ADHERE TO THE MINIMUM COVER SPECIFIED BECAUSE OF AN UNDERGROUND OBSTRUCTION, A PROTECTIVE SLAB WILL BE NEEDED AND THE ENGINEER SHALL GIVE APPROVAL BEFORE THE CONFIGURATION OF THE DUCT SECTION OR DEPTH OF COVER IS REVISED.
11. THE CITY OF BALTIMORE CONDUIT INSPECTION & APPROVAL IS REQUIRED PRIOR TO BGE & CABLE INSTALLATION.
12. ALL CONDUIT SECTIONS SHALL BE PER BALTIMORE CITY DETAIL BC 824.01 (STANDARD DUCT SECTIONS) UNLESS OTHERWISE NOTED.
13. AT ALL ENTRANCES INTO MANHOLES, THE CONTRACTOR SHALL FURNISH AND INSTALL DUCT TERMINATORS IN ACCORDANCE WITH BALTIMORE CITY STANDARDS.
14. CONTRACTOR TO REMOVE EXISTING CONDUIT TO BE ABANDONED AS NECESSARY TO PERFORM NEW CONSTRUCTION AND PLUG EXISTING CONDUIT WITH MIX NO. 2 CONCRETE. PRICE AND PAYMENT SHALL BE INCIDENTAL TO THE INSTALLATION OF NEW CONDUIT AND MANHOLES.
15. ALL PROPOSED MANHOLES WILL BE DESIGNED FOR HS-25 LOADING. PROPOSED MANHOLES ARE REQUIRED TO HAVE A MINIMUM OF TWO (2) FEET OF COVER FROM THE PROPOSED GROUND LINE TO THE TOP OF THE MANHOLE ROOFSLAB BALTIMORE CITY DETAIL 825. 11.
16. TRENCHES FOR UNDERGROUND DUCT BANK SHALL BE EXCAVATED TO A UNIFORM GRADE AND BRACED AND SHEATHED. WATER SHALL BE REMOVED AS NECESSARY. NO CONDUIT SHALL BE LAID IN WATER.
17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ANY PRECAST MANHOLES MEETING HS- 25 LOAD REQUIREMENTS. THE SHOP DRAWINGS SHALL BE SEALED, DATED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.
18. ALL CONCRETE DUCT ENCASEMENT SHALL BE MIX. NO. 1.
19. ALL UNDERGROUND DUCT BANKS SHALL HAVE MAGNETICALLY DETECTABLE PLASTIC WARNING TAPER INSTALLED 12" ABOUT THE DUCT BANK FOR THE ENTIRE LENGTH OF THE DUCT BANK.
20. CONTRACTOR SHALL RETURN FINISHED GRADE TO PRE-CONSTRUCTED GRADE DURING UTILITY TRENCHING ACTIVITIES.



30 15 0 30 60

SCALE: 1" = 30'

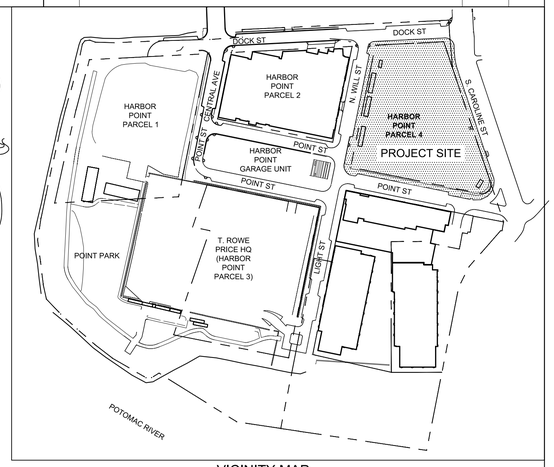
DUCT SECTIONS

- D-1 TYPE 'Y' DUCT SECTION, 1-3" I.D. PVC
- D-2 TYPE 'X' DUCT SECTION, 2-4" I.D. PVC
- D-3 TYPE 'O' DUCT SECTION, 4-5" I.D. PVC
- D-4 TYPE 'O' DUCT SECTION, 4-6" I.D. PVC

UTILITY DISPOSITION NOTES

- E-1 EXISTING CITY/BGE DUCTBANK TO REMAIN UNDISTURBED
- H-1 PROTECT AND MAINTAIN IN SERVICE THE EXISTING LIGHTING / TRAFFIC HANDBOX
- H-2 MODIFY EXISTING LIGHTING HANDBOX TO TRAFFIC BEARING BOX
- L-1 RELOCATE EXISTING POST TOP LIGHT STANDARD
- L-2 INSTALL STANDARD TEAR DROP LIGHT POLE ON EXISTING PEDESTAL
- L-3 PROTECT AND MAINTAIN IN SERVICE THE EXISTING LIGHT POLE
- L-4 REMOVE EXISTING POST OP LIGHT POLE AND BASE
- L-5 TEMPORARILY REMOVE EXISTING INNER HARBOR 32' LIGHT POLE DURING PLACEMENT OF THE PROPOSED WATER METER VAULT
- P-1 RELOCATE EXISTING PARK SERVICE ELECTRIC PANEL TO FACE OF BUILDING WALL, SEE MEP DRAWINGS AND DA CONSTRUCTION DETAILS
- P-2 REMOVE EXISTING ELECTRICAL PANEL AND BASE TO INSTALL 4' SQUARE PRECAST JUNCTION BOX FOR BGE SECONDARY CABLE SERVICE, SEE DETAIL X
- P-3 INTERCEPT EXISTING PRIVATE 2-4" SERVICE CONDUITS FROM THE PARK WITH A HANDBOX, SEE DETAIL X
- T-1 EXISTING TELECOM DUCTBANK TO REMAIN UNDISTURBED
- T-2 EXISTING TELECOM MANHOLE TO REMAIN UNDISTURBED
- TS-1 PROTECT AND MAINTAIN IN SERVICE THE EXISTING TRAFFIC SIGNAL POLE

AS BUILT REVISIONS	REVISIONS			
	NO.	DESCRIPTION	DATE	BY
BY:				
DATE:				



VICINITY MAP

SCALE: 1" = 200'

200 100 0 200 400

SCALE: 1" = 200'

CONSTRUCTION NOTES

KEY U-1

- U-1. BGE GAS SERVICE TO BGE GAS METER ROOM, BY OTHERS
- U-2. PRIMARY ELECTRIC DUCTBANK WITH 3RD PARTY TELECOMMUNICATIONS CONDUITS
- U-3. VERIZON SUBSIDIARY COMMUNICATION DUCTBANK, BY OTHERS
- U-4. PRIMARY ELECTRIC DUCTBANK TO BGE SWITCHGEARS

PROPOSED LEGEND

- LOD — LIMIT OF DISTURBANCE
- G — BGE GAS SERVICE, BY OTHERS
- E — ELECTRIC DUCTBANK
- VERIZON SUBSIDIARY TELECOM DUCTBANK, BY OTHERS
- C — COMMUNICATION DUCTBANK
- PARK SERVICE ELECTRIC PANEL
- BGE SWITCHGEAR VAULT, EQUIPMENT BY OTHERS
- ELECTRIC MANHOLE
- 11'-6" ALUM LIGHT POLE WITH 88W LED MODERN POST TOP
- 22'-6" STEEL LIGHT POLE WITH 150W LED TEAR DROP
- HANDBOX

CHIEF, TRANSPORTATION, OFFICE OF ENGINEERING & CONSTRUCTION DATE

DIRECTOR, DEPARTMENT OF TRANSPORTATION DATE

DESIGNED: RAF/FWS
DRAWN BY: JPS
CHECKED BY: CDK

WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
APPROVED BY:											
DATE APPROVED:											

PRELIMINARY SUBMISSION

PROJECT DATUM:
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Engineers | Construction Managers | Planners | Scientists
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Contact: John d'Epagnier

DA500

HARBOR POINT PARCEL 4 HOLDINGS, LLC
OWNER/DEVELOPER/APPLICANT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS

DEVELOPER AGREEMENT No.XXXX

HARBOR POINT PARCEL 4

1402 POINT ST

CONDUIT PLAN

SCALE: AS SHOWN DATE: AUGUST 20, 2021

WARD 03, SECTION 07, BLOCK 1815, LOT 004 **SHEET 12 OF 13**

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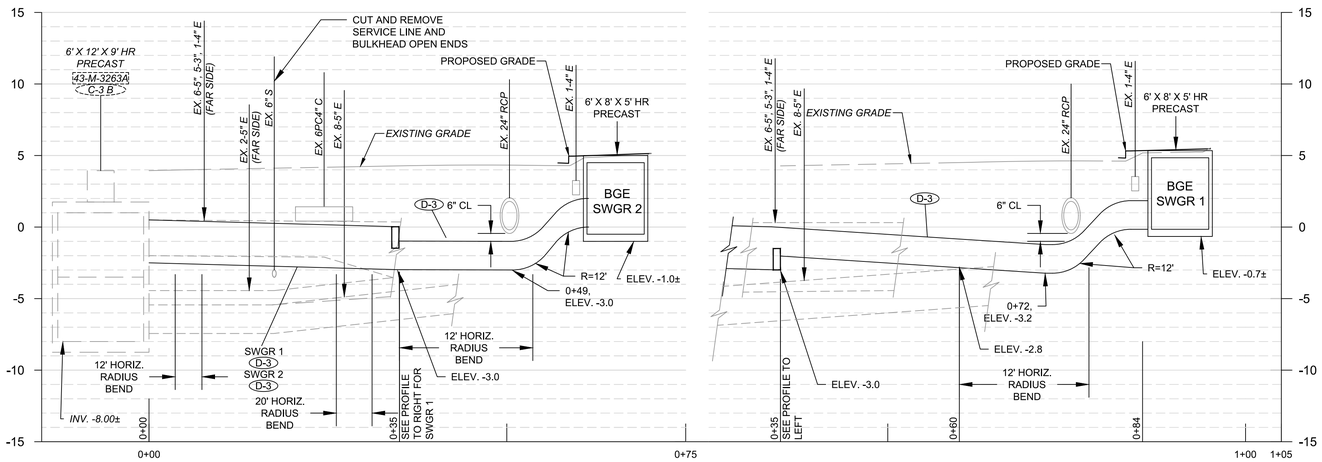
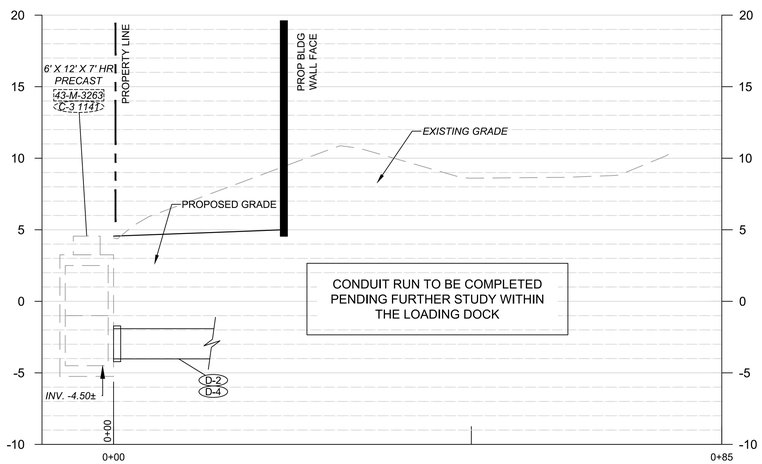
AS BUILT REVISIONS	REVISIONS			
	NO.	DESCRIPTION	DATE	BY
BY:				
DATE:				



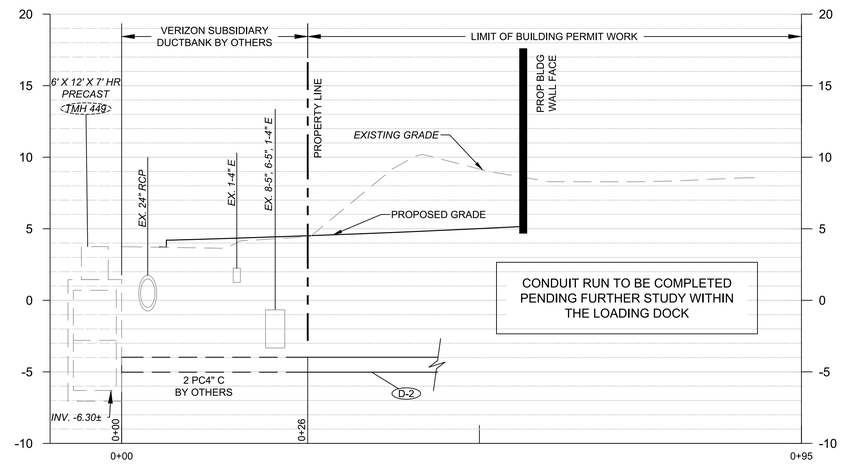
ELECTRIC SWITCHGEARS 1 AND 2

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'



ELECTRIC SERVICE

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'



COMMUNICATION SERVICE

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

CONDUIT MANHOLE DETAILS TO BE DEVELOPED

CONDUIT SECTIONS AND DETAILS TO BE DEVELOPED

DIRECTOR, BUREAU OF ENGINEERING & CONSTRUCTION — DATE

DIRECTOR, DEPARTMENT OF TRANSPORTATION — DATE

WARD:	03		
SECTION:	07	SECT.	APP.
BLOCK:	1815		
LOT:	004		

DESIGNED: RAF/FWS
DRAWN BY: JPS
CHECKED BY: CDK

BALTIMORE CITY REVIEW	R/W RELEASE	HIGHWAY DESIGN	BRIDGES	DRAINAGE	LIGHTING	CONDUIT	SEDIMENT AND EROSION CONTROL	TRAFFIC ENGINEERING	WASTE WATER ENGINEERING	WATER ENGINEERING	SIGNAL ENGINEERING
APPROVED BY:											
DATE APPROVED:											

PRELIMINARY SUBMISSION

PROJECT DATUM:
- BALTIMORE CITY HORIZONTAL DATUM
- BALTIMORE CITY VERTICAL DATUM

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DA501

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HARBOR POINT PARCEL 4

1402 POINT ST

CONDUIT PROFILES

SCALE: AS SHOWN — DATE: AUGUST 20, 2021

WARD 03, SECTION 07, BLOCK 1815, LOT 004 — **SHEET 13 OF 13**

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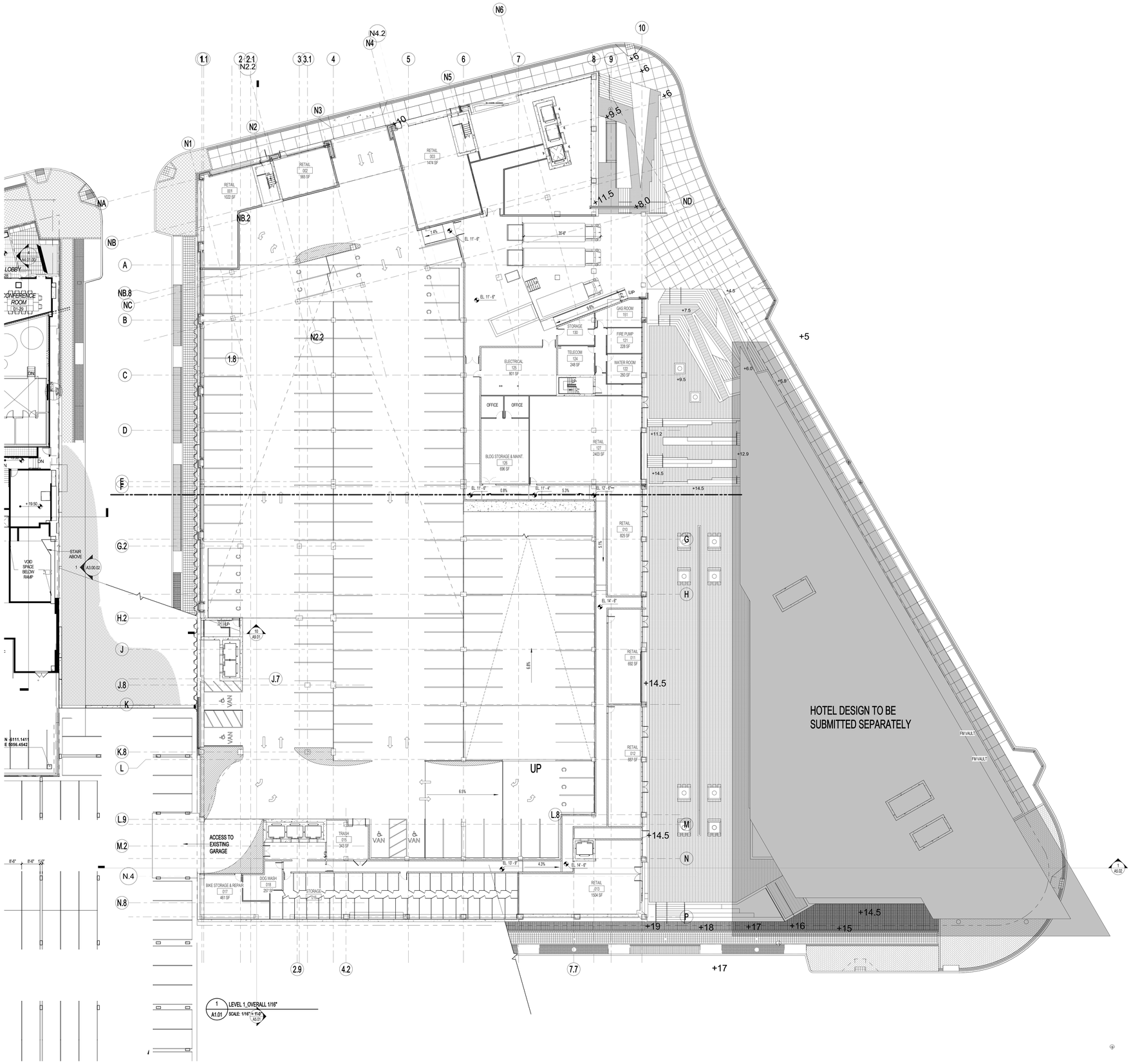

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(443) 286-6562

key

project
PARCEL 4 APARTMENT AND GARAGE

1402 POINT STREET
BALTIMORE, MD 21231

seal

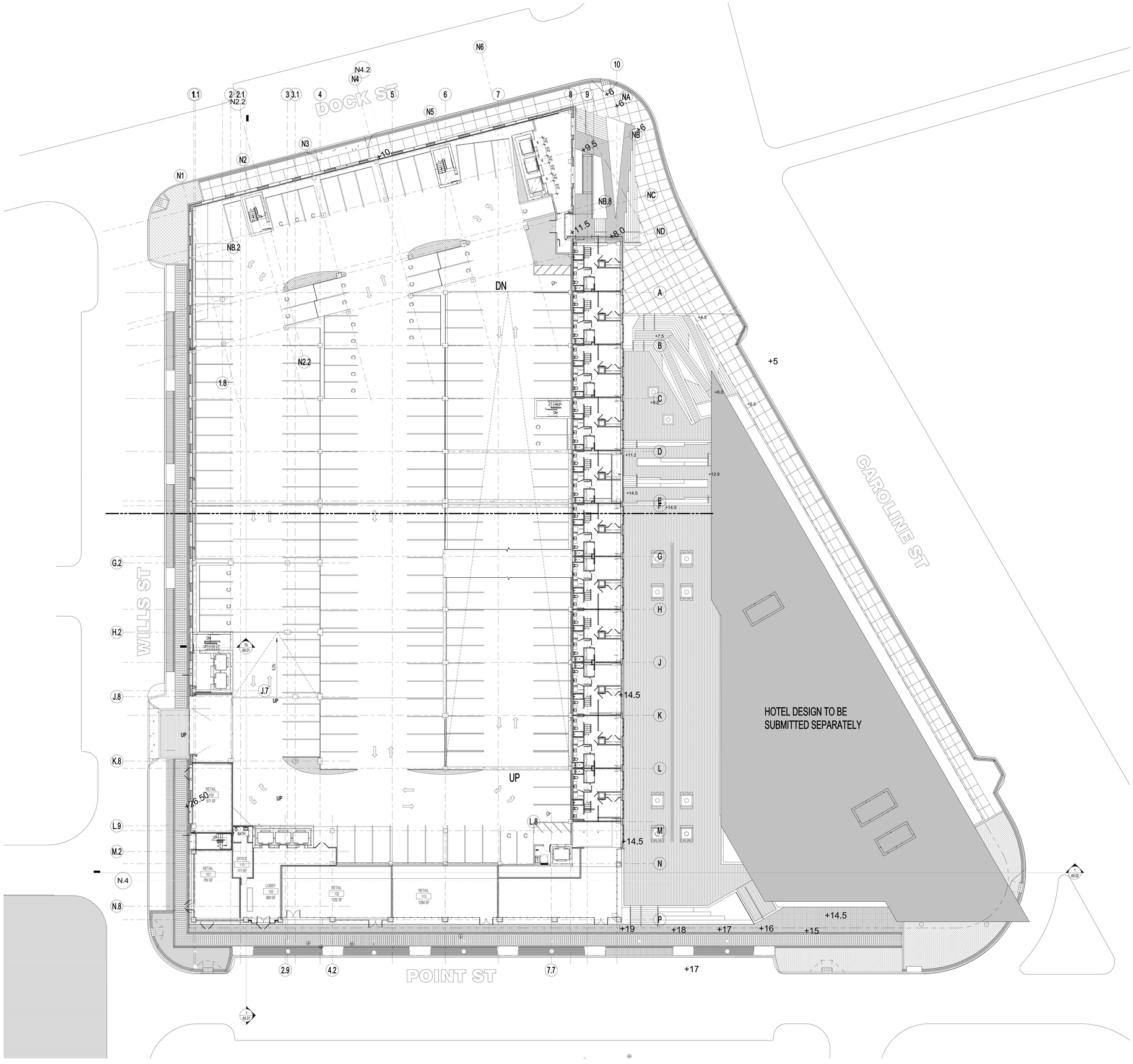
issued	date	description
	08/02/2021	Permit Set

title
LEVEL 1 FLOOR PLAN (+14'-0")

drawn by:	Author
checked by:	Approver
scale:	1/16" = 1'-0"
project number:	10120.00
	scaled inch

sheet number
A1.01

8/2/2021 4:47:53 PM



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project
PARCEL 4 APARTMENT AND GARAGE

1402 POINT STREET
BALTIMORE, MD 21231

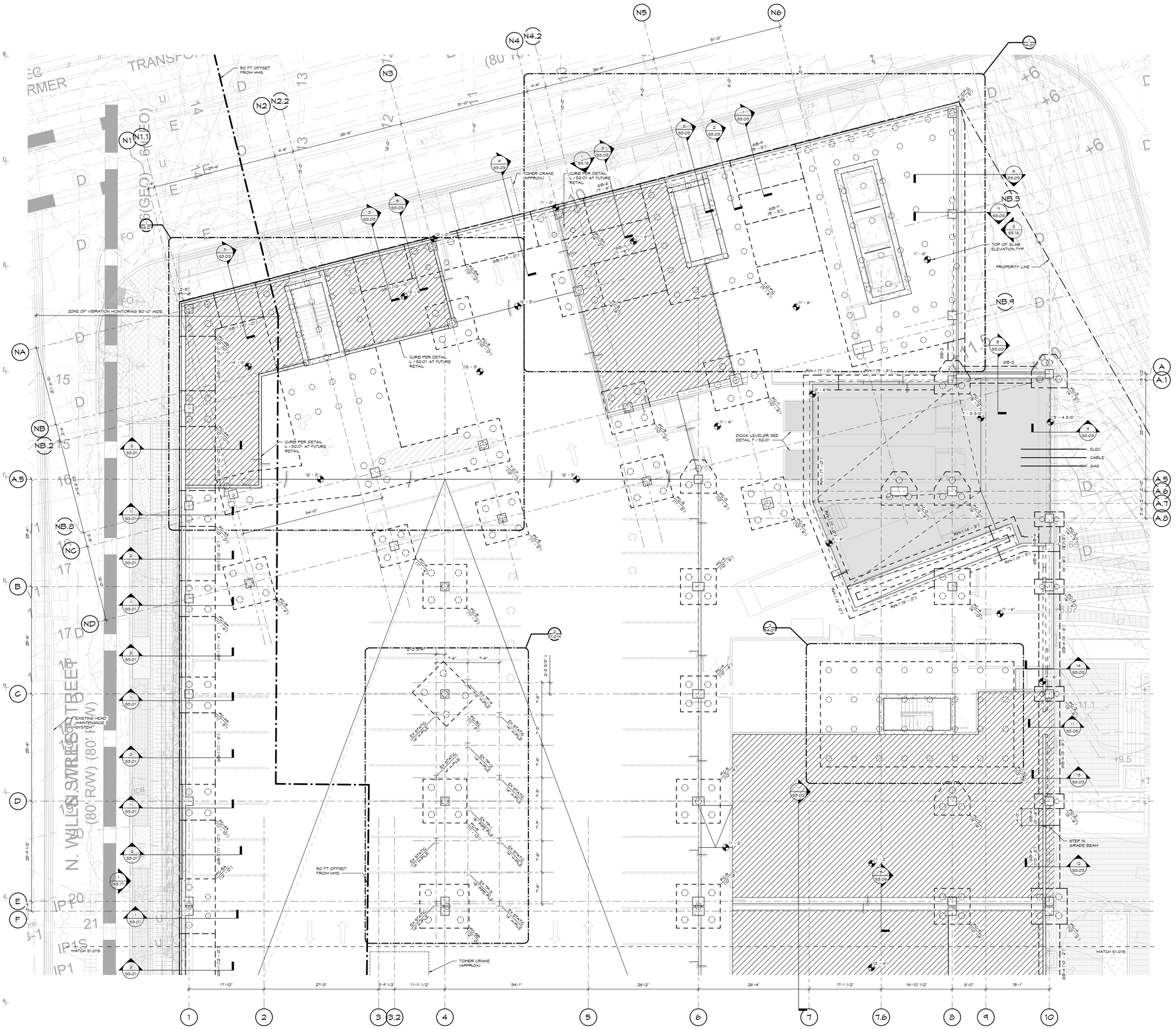
seal

issued	date	description
	08/02/2021	Permit Set

title
LEVEL 2 FLOOR PLAN (+28'-0")

drawn by:	Author
checked by:	Approver
scale:	1/16" = 1'-0"
project number:	10120.00
	scaled inch

sheet number
A1.02



FOUNDATION PLAN - NORTH

1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. TOP OF SLAB ELEVATION VARIES. TYP TOP OF CONCRETE SLAB ELEVATION = 14.00'. COORDINATE ELEVATIONS WITH FINAL ARCHITECTURAL & CIVIL DRAWINGS.
2. ELEVATIONS NOTED ON THE STRUCTURAL PLANS ARE IN RELATION TO SEA LEVEL AND BASED ON BALTIMORE CITY VERTICAL DATUM (BGVD).
3. TOP OF PILE CAP ELEVATION INDICATED THUS: (X'-XX") IN PLAN. ELEVATIONS INDICATED ARE ELEVATIONS ABOVE SEA LEVEL.
4. PILE CAPS ARE INDICATED IN PLAN AS "PC-##". SEE TYPICAL DETAILS FOR PILE CAP GEOMETRY & REINFORCING.
5. CONCRETE SLAB ON GRADE SHALL CONSIST OF NORMAL WEIGHT CONCRETE PLACED OVER PLACED OVER A 6" THICK COMPACTED GRANULAR BASE AND 8 MIL VAPOR RETARDER. GRANULAR FILL SHALL BE PLACED IN ACCORDANCE WITH GEOTECHNICAL REQUIREMENTS AND "EN-SERIES" DRAWINGS. SEE SCHEDULE BELOW FOR SLAB THICKNESS AND REINFORCING.
6. SLAB ON GRADE CONTROL JOINTS ARE SHOWN ON PLAN THUS: "CJ". (SEE TYPICAL DETAILS). SLAB ON GRADE CONTROL JOINTS SHALL BE SPACED AT A MAXIMUM OF 15'-0" OC IN EITHER DIRECTION, TO FORM A RECTANGLE AS CLOSE TO 1:1 BUT NOT TO EXCEED 1:1½.
7. ALL PARKING GARAGE LEVEL CONCRETE SHALL RECEIVE CORROSION INHIBITING ADMIXTURE.
8. "GB-X" IN PLAN INDICATES CONCRETE GRADE BEAM. SEE SCHEDULE FOR SIZE AND REINFORCING. MIN CONCRETE COMPRESSIVE STRENGTH, f'c, SHALL BE 6,000 PSI FOR GRADE BEAMS.
9. IN PLAN INDICATES SLAB ON GRADE TO BE LEFT OUT AS DIRECTED BY THE OWNER. SEE SECTIONS FOR ADDITIONAL INFORMATION.
10. RW-X IN PLAN INDICATES CONCRETE RETAINING WALL & RETAINING WALL FOOTING SEE S2.01 FOR ADDI. INFORMATION.
11. PROVIDE VIBRATION AND SETTLEMENT MONITORING OF THE HEAD MAINTENANCE SYSTEM (HMS) WHEN DRIVING PILES WITHIN 50' OF EXISTING HMS. A 50' OFFSET LINE FROM THE CENTERLINE OF THE EXISTING HMS IS INDICATED IN THE ABOVE PLAN FOR REFERENCE.
12. EXISTING PILES IN PLAN SHALL BE CUT DOWN TO A MIN OF 1'-0" BELOW BOTTOM OF NEW PILE CAPS OR SLAB ON GRADE.

KEY:

50' HEAD MAINTENANCE SYSTEM (HMS) OFFSET

CONCRETE SLAB KEY:

HATCH	f'c	SLAB THICKNESS	REINFORCING
	4,500 PSI	5" SLAB ON GRADE	4"X4"-W2.9xW2.9 WWF
	4,500 PSI	8" LOADING DOCK SLAB ON GRADE	#4@12" OC EA WAY

GRADE BEAM SCHEDULE

MARK	SIZE		REINFORCING		STIRRUPS			REMARKS
	(W)	(D)	BOTTOM BARS	TOP BARS	SIZE	TYPE	SPACING	
GB-1	1'-0"	3'-0"	4-#8	4-#8	#5	2-LEG	12" OC	
GB-2	4'-0"	3'-0"	2-#8	2-#8	#4	2-LEG	12" OC	
GB-3	4'-0"	4'-0"	7-#8	7-#8	#4	2-LEG	12" OC	
GB-4	8'-0"	2'-6"	4-#8	4-#8	#4	2-LEG	12" OC	
GB-5	1'-6"	3'-0"	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	
GB-6	1'-0"	3'-0"	4-#8	4-#8	#5	4-LEG	10" OC	
GB-7	1'-0"	3'-0"	13-#8	12-#8	#5	6-LEG	10" OC	
GB-8	1'-0"	3'-0"	16-#8	11-#8	#5	6-LEG	12" OC	
GB-9	1'-0"	3'-0"	24-#9	21-#8	#5	6-LEG	10" OC	

PILE CAP WATERPROOFING NOTES:

1. WATERPROOF PILE CAPS WHERE BOTTOM OF PILE CAP EXTENDS BELOW ELEVATION 3'-0" IN ACCORDANCE WITH DDP SECTION 5.2.2.
2. APPLIES TO PILE CAPS AT SHEAR WALL GROUPS 2, 3, & 17, AND ANY OTHER PILE CAPS WITH A BOTTOM OF PILE CAP ELEVATION LOWER THAN ELEVATION 3'-0".
3. EXTENT WATERPROOFING UP SIDES OF CAPS A MINIMUM OF 1'-0" ABOVE ELEVATION 3'-0".

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project
PARCEL 4 APARTMENT AND GARAGE
1402 POINT STREET
BALTIMORE, MD 21231

seal

DDP SUBMISSION

issued	date	description
	08/02/2021	Permit Set
	09/29/2021	DDP Submission
	11/01/2021	Check Set
	01/12/2022	DDP Set

title
FOUNDATION PLAN - NORTH

drawn by:	RJA
checked by:	JGB
scale:	As indicated
project number:	MRA 18408.11/BHC 10120.00
	scaled inch

sheet number
S1.01N

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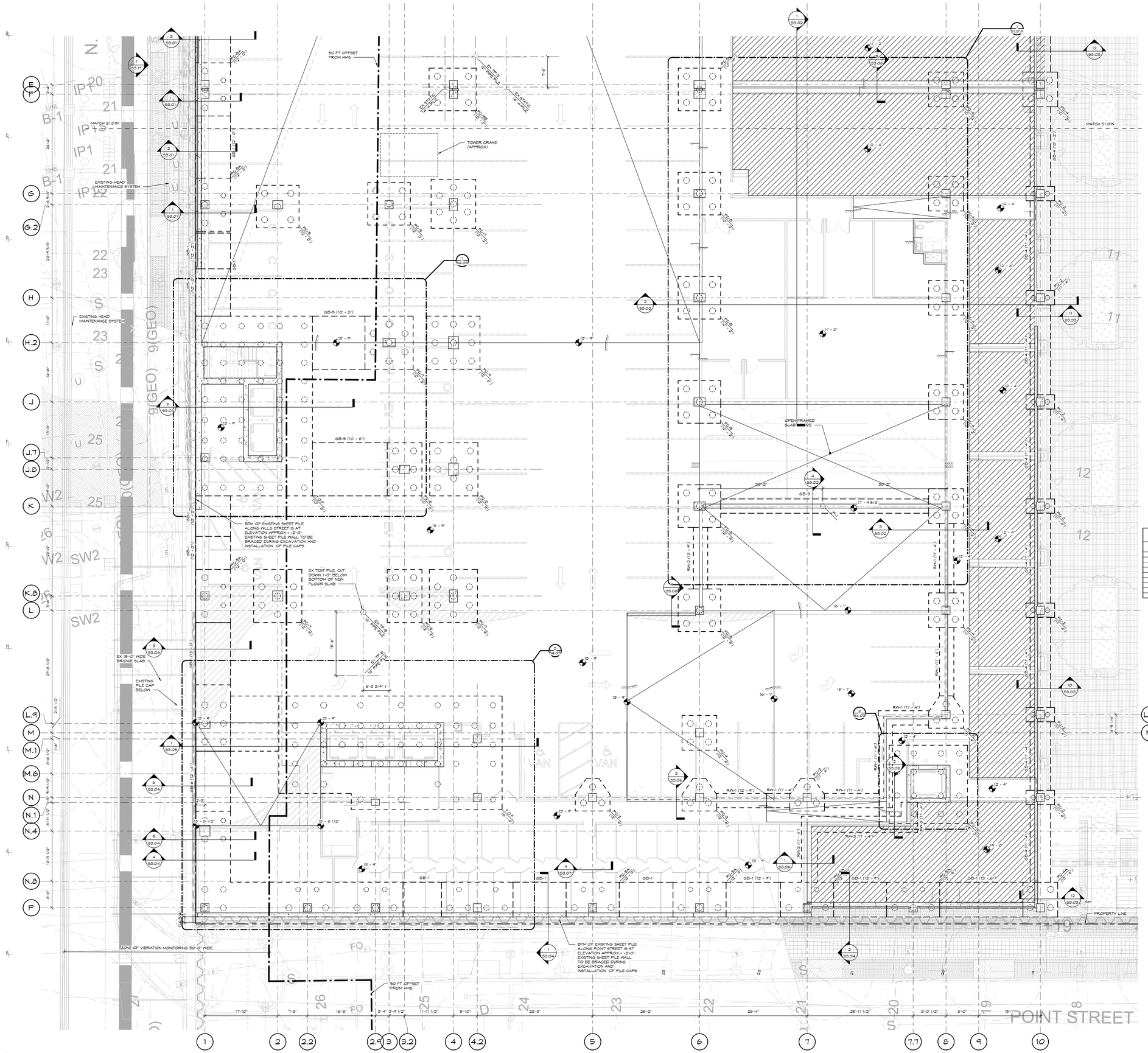

FOUNDATION PLAN - SOUTH

1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. TOP OF SLAB ELEVATION VARIES. TYP TOP OF CONCRETE SLAB ELEVATION = 14.00'. COORDINATE ELEVATIONS WITH FINAL ARCHITECTURAL & CIVIL DRAWINGS.
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6. SLAB ON GRADE CONTROL JOINTS ARE SHOWN ON PLAN THUS: "CJ" (SEE TYPICAL DETAILS). SLAB ON GRADE CONTROL JOINTS SHALL BE SPACED AT A MAXIMUM OF 15'-0" OC IN EITHER DIRECTION, TO FORM A RECTANGLE AS CLOSE TO 1:1 BUT NOT TO EXCEED 1:1½.
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KEY:

50' HEAD MAINTENANCE SYSTEM (HMS) OFFSET

CONCRETE SLAB KEY:

HATCH	F'c:	SLAB THICKNESS:	REINFORCING
	4,500 PSI	5" SLAB ON GRADE	4"X4"-W2.9xW2.9 WWF
	4,500 PSI	8" LOADING DOCK SLAB ON GRADE	#4@12" OC EA WAY

GRADE BEAM SCHEDULE

MARK	SIZE		REINFORCING		STIRRUPS			
	W	D	BOTTOM BARS	TOP BARS	SIZE	TYPE	SPACING	REMARKS
GB-1	102"	30"	8-#9	8-#9	#5	2-LEG	12" OC	
GB-2	40"	30"	8-#9	8-#9	#4	2-LEG	12" OC	
GB-3	42"	42"	7-#8	7-#8	#4	2-LEG	12" OC	
GB-4	80"	24"	4-#6	4-#6	#4	2-LEG	12" OC	
GB-5	156"	36"	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	
GB-6	102"	30"	8-#9	8-#9	#5	4-LEG	10" OC	
GB-7	128"	36"	15-#9	10-#9	#5	6-LEG	10" OC	
GB-8	102"	36"	16-#9	11-#9	#5	6-LEG	12" OC	
GB-9	102"	36"	24-#9	21-#9	#5	6-LEG	10" OC	

PILE CAP WATERPROOFING NOTES:

1. WATERPROOF PILE CAPS WHERE BOTTOM OF PILE CAP EXTENDS BELOW ELEVATION 3.0' IN ACCORDANCE WITH DDP SECTION 9.2.2.
2. APPLIES TO PILE CAPS AT SHEAR WALL GROUPS 2, 3, & 4.7, AND ANY OTHER PILE CAPS WITH A BOTTOM OF PILE CAP ELEVATION LOWER THAN ELEVATION 3.0'.
3. EXTENT WATERPROOFING UP SIDES OF CAPS A MINIMUM OF 1'-0" ABOVE ELEVATION 3.0'.

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01/12/2022	DDP Set

title
FOUNDATION PLAN - SOUTH

drawn by:	RJA
checked by:	JGB
scale:	As indicated
project number:	MRA 18408.11/BHC 10120.00
	scaled inch

sheet number
S1.01S

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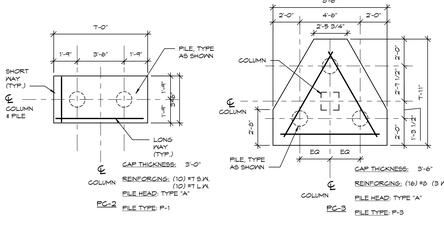

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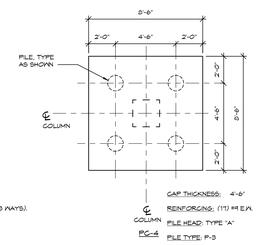
PC-3



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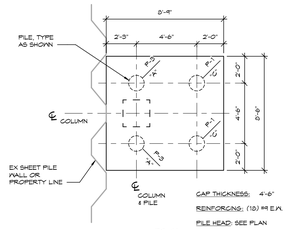

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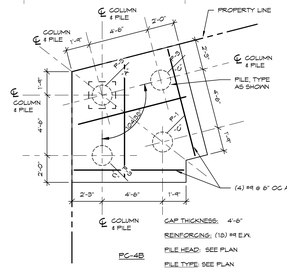

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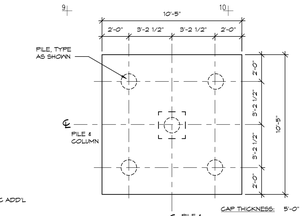

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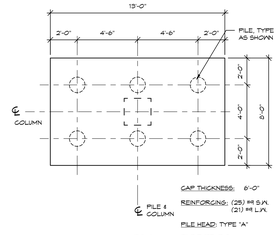
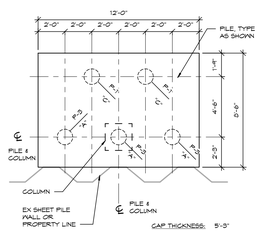
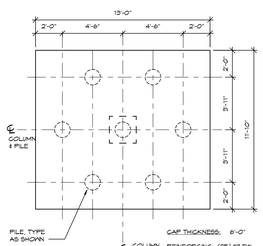


PC-6



PC-5A



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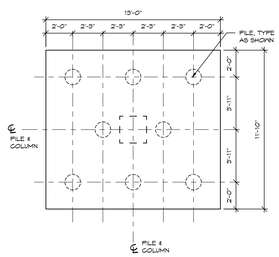

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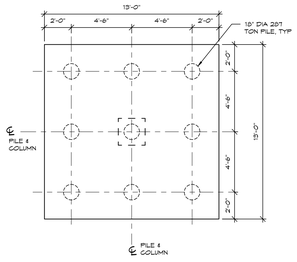

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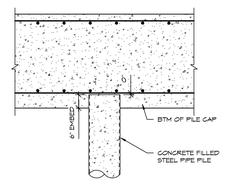
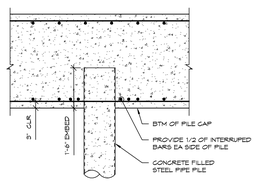
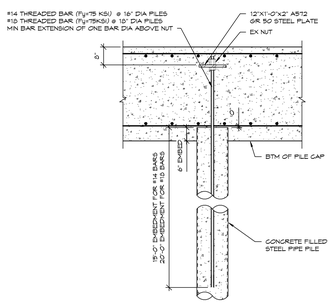


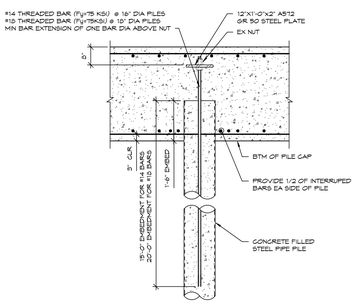
TYPE 'A' FREE HEAD PILE



TYPE 'B' FIXED HEAD PILE



TYPE 'C' FREE HEAD TENSION PILE



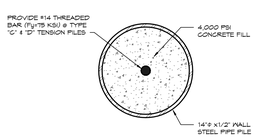
TYPE 'D' FIXED HEAD TENSION PILE

B PIPE PILE HEAD CONFIGURATION
1/2" = 1'-0"

PILE CAP NOTES:

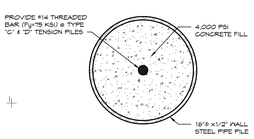
1. PILE LOCATION SHALL NOT DEVIATE FROM DIMENSIONS SHOWN BY MORE THAN 3".
2. SHOULD ACTUAL PILE INSTALLATION LOCATION RESULT IN PILE LAYOUT THAT DIFFERS FROM ABOVE BY MORE THAN 3", CONTRACTOR SHALL SUBMIT TO MRA A PLAN SHOWING ACTUAL PILE LAYOUT. DO NOT CUT-OFF PILES OR FABRICATE PILE CAP REINFORCING PRIOR TO MRA'S REVIEW OF INSTALLED PILE LAYOUT.
3. PILE CAP GEOMETRY SHALL BE ADJUSTED TO MAINTAIN MINIMUM EDGE DISTANCE OF 2'-0". PILE CUT-OFF ELEVATION AND PILE CAP THICKNESS MAY NEED TO BE ADJUSTED DEPENDING ON ACTUAL PILE INSTALLATION LOCATIONS. EDGE DISTANCE IS DEFINED AS DISTANCE FROM PILE CENTERLINE TO EDGE OF PILE CAP.
4. ALL PILES SUPPORTING PILE CAPS AS DETAILED ABOVE SHALL BE THE PILE TYPE INDICATED THUS: "P-X". SEE DETAIL C / S2.00 PILE SIZE AND DTETAILING.
5. PILE CAP CONCRETE f'c = 6,000 PSI (28-DAY COMPRESSIVE STRENGTH).
6. PILE HEAD CONDITION (FREE HEAD, FIXED HEAD, TENSION PILE) SHALL BE AS INDICATED ABOVE AND PER DETAIL B / S2.00.
7. SEE SHEET S4.01 - S4.03 FOR ADDITIONAL UNIQUE PILE CAP LAYOUTS

A TYPICAL PILE CAP DETAILS
1/4" = 1'-0"



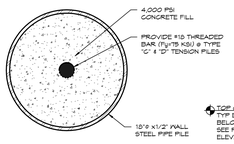
200 TON ALLOWABLE CAPACITY

P-1



250 TON ALLOWABLE CAPACITY

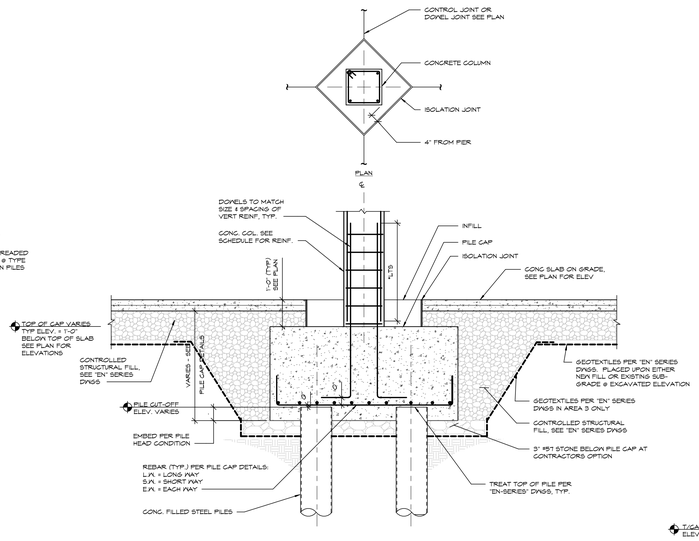
P-2



287 TON ALLOWABLE CAPACITY

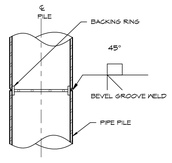
P-3

C DRIVEN STEEL PIPE PILES
1 1/2" = 1'-0"



1. EXCAVATION PROCEDURES AND SOIL MANAGEMENT WILL BE ADDRESSED IN THE APPROVED EXCAVATION PLAN. EXCAVATIONS WILL BE DEWATERED AS NECESSARY WITH WATER BEING DISPOSED OF AT AN APPROVED OFF-SITE FACILITY.
2. EXCAVATIONS SHALL BE SIZED SUCH THAT THE MINIMUM LATERAL DIMENSIONS AT THE BOTTOM OF EXCAVATION ARE SUFFICIENT FOR PLACEMENT OF GEOTEXTILES AND FOUNDATION FORMWORK. EXCAVATION SIDEWALLS SHALL BE SLOPED AND SHAPED TO FACILITATE PLACEMENT OF THE GEOSYNTHETICS.
3. CUT AND REMOVE GEOTEXTILE AT PILE PENETRATION IN PILE CAP.
4. DUE CARE SHALL BE TAKEN DURING PILE CAP CONSTRUCTION AND SUBSEQUENT BACKFILLING OF THE EXCAVATION TO PROTECT THE GEOTEXTILES FROM CONSTRUCTION RELATED DAMAGE.
5. ALL PILE CAP REINFORCING SHALL TERMINATE IN 90 DEGREE HOOK, TYP EA END.
6. REFER TO S-SERIES STRUCTURAL DRAWINGS FOR COLUMN AND DOWEL REINFORCING SCHEDULES AND DETAILS.
7. REFER TO 'EN' SERIES DRAWINGS FOR AREA 3 SUBGRADE/CAP SPECIFICATIONS AND REQUIREMENTS.

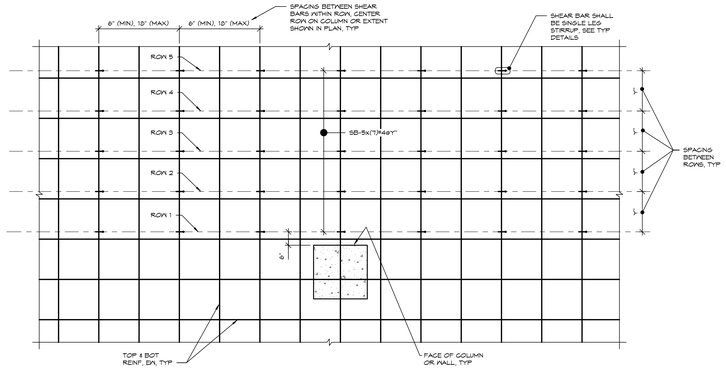
E TYPICAL PILE CAP DETAIL @ SLAB ON GRADE LOCATIONS
1/2" = 1'-0"



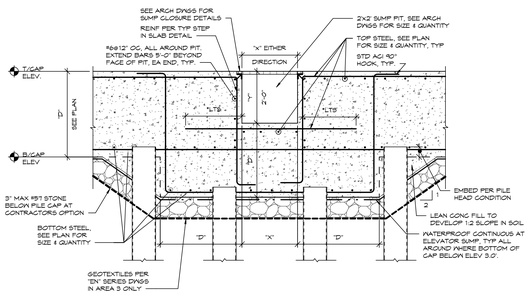
NOTES:

1. PROVIDE MAXIMUM (2) SPLICES PER PILE.
2. SPLICES SHALL BE LOCATED A MINIMUM OF 15 FEET BELOW PILE CUT-OFF ELEVATION.

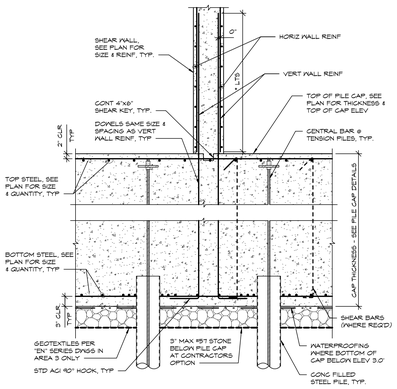
D PIPE PILE SPLICE DETAIL
1" = 1'-0"



F SHEAR BAR LAYOUT IN MAT SLAB OR PILE CAP
1/2" = 1'-0"



G ELEVATOR SUMP PIT DETAIL
3/8" = 1'-0"



H SHEAR WALL TO PILE CAP DETAIL
3/8" = 1'-0"

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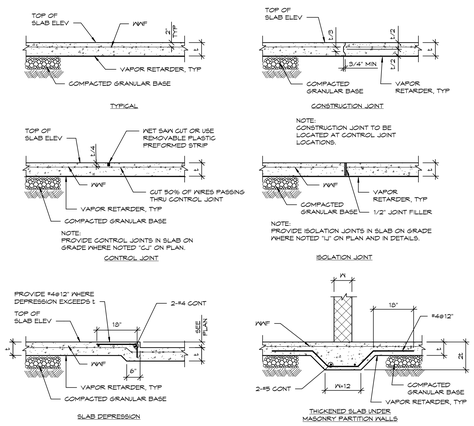
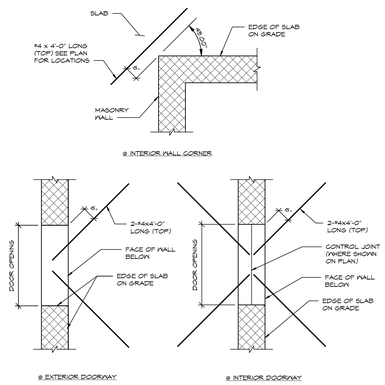
checked by:	JGB
scale:	As indicated
project number:	MRA 18408.11/BHC 10120.00

scaled inch

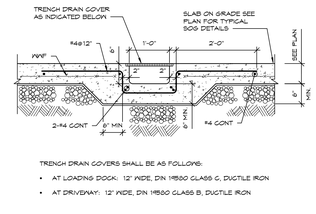
sheet number
S2.00



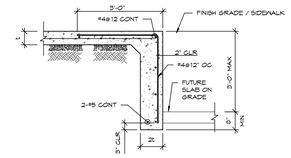
A TYPICAL SLAB-ON-GRADE DETAILS
1/2" = 1'-0"



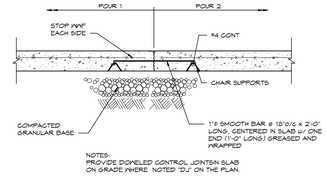
B ADDITIONAL SLAB ON GRADE REINFORCING
1/2" = 1'-0"



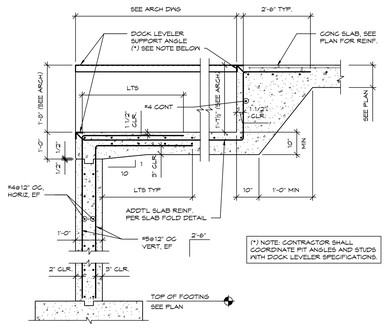
C TRENCH DRAIN @ SLAB ON GRADE
3/4" = 1'-0"



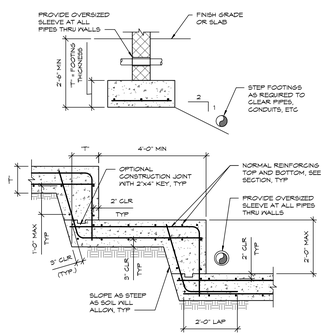
D INTERIOR TURN-DOWN SLAB DETAIL
1/2" = 1'-0"



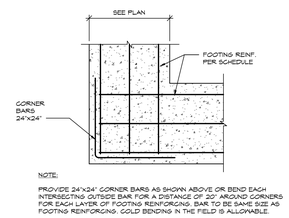
E SLAB ON GRADE DOWEL JOINT
3/4" = 1'-0"



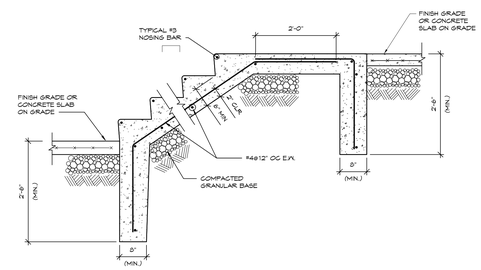
F TYPICAL DOCK LEVELER
1/2" = 1'-0"



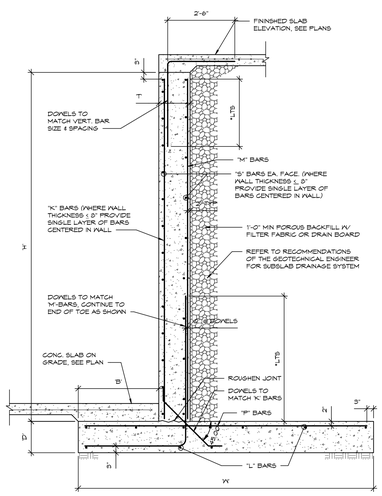
G TYPICAL STEPPED WALL FOOTING
1/2" = 1'-0"



H TYPICAL WALL FOOTING CORNER PLAN
3/4" = 1'-0"



J CONCRETE STAIR ON GRADE
3/4" = 1'-0"

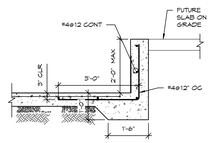


RETAINING WALL SCHEDULE

MARK	H	T	D	W	B	M-BARS	K-BARS	S-BARS	P-BARS	L-BARS
RW-1	UP TO 6'-6"	0' - 8"	1' - 0"	3' - 6"	1' - 6"	N/A	#5@12" CENTERED	#4@12"	#5@12	#4@12
RW-2	UP TO 8'-6"	0' - 8"	1' - 6"	3' - 6"	1' - 6"	N/A	#5@12" CENTERED	#4@12"	#5@8	#5@8
RW-3	UP TO 12'-0"	1' - 0"	1' - 0"	4' - 0"	1' - 7"	#5 @ 12"	#5@12	#4@12"	#5@12	#4@12

NOTE: ALL WALLS HAVE BEEN DESIGNED AS CANTILEVERED WALLS IN THEIR INITIAL CONSTRUCTION CONDITION AND ARE TO BE RESTRAINED IN THEIR FINAL CONDITION.

K TYPICAL RETAINING WALL DETAIL
1/2" = 1'-0"



L CURB AT FUTURE RETAIL DETAIL
1/2" = 1'-0"

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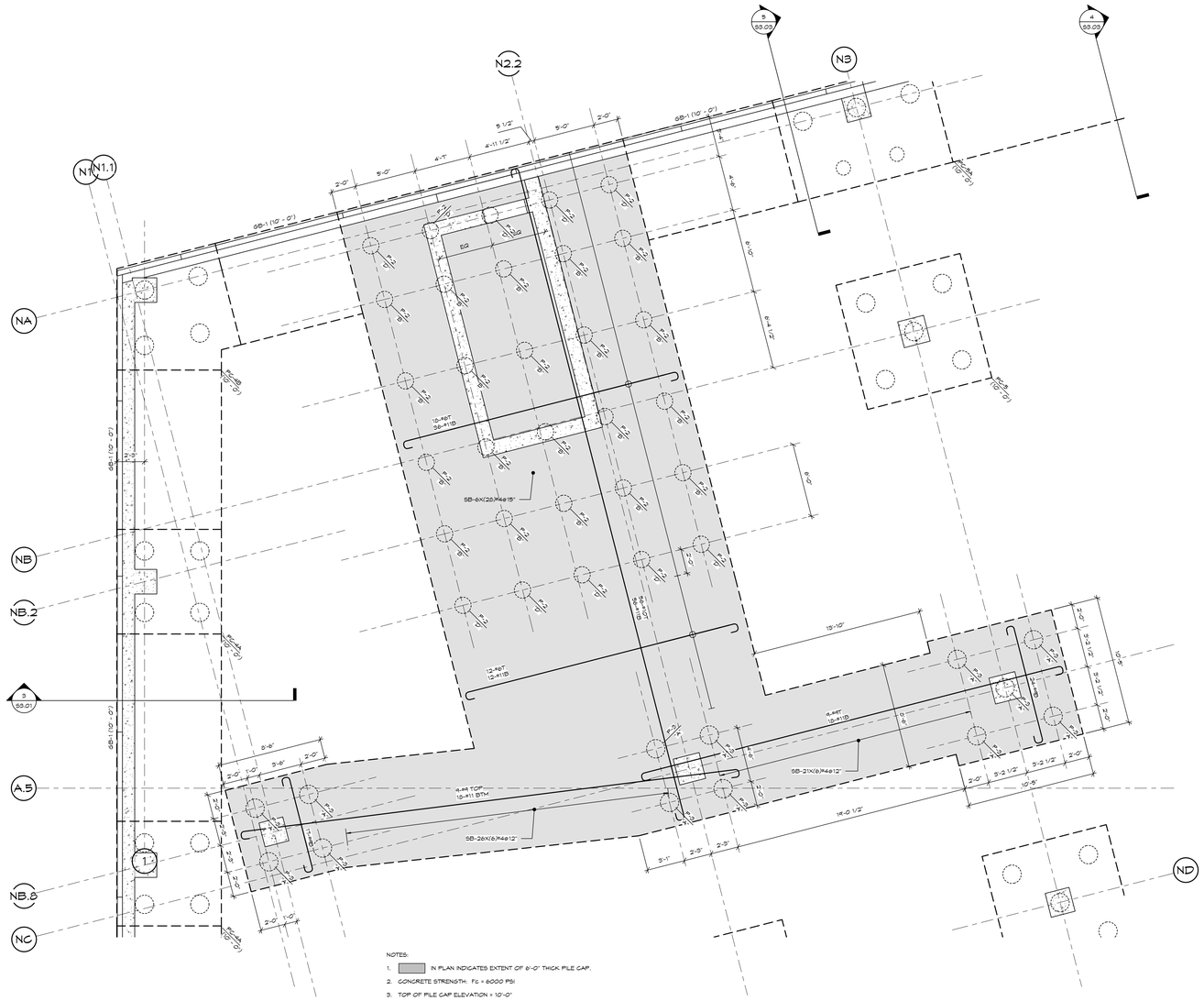
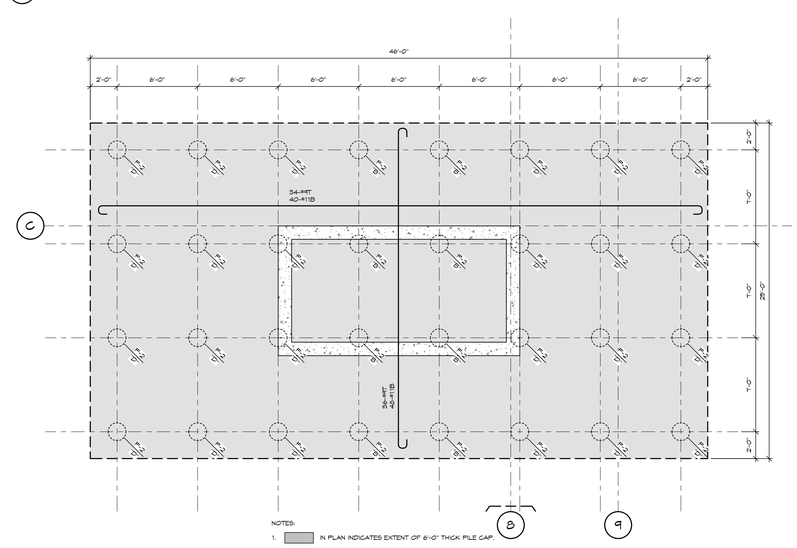
1/12/2022 8:07:24 AM



NOTES:

1. IN PLAN INDICATES EXTENT OF 8'-0" THICK PILE CAP.
2. CONCRETE STRENGTH: F'c = 6000 PSI
3. TOP OF PILE CAP ELEVATION = 10'-0"
4. SEE TYPICAL DETAILS FOR SHEAR BAR PLACING DETAIL WITHIN MAT PILE CAPS.
   TYPICAL SHEAR BAR CALLOUTS IN PLAN ARE AS FOLLOWS: SB-5X(12)#4@8"
   - SHEAR BAR INDICATOR
   - NO. OF ROWS SHEAR BARS
   - SPACING BETWEEN ROWS
   - BAR SIZE
   - NO. BARS PER ROW

1 / S1.01 SHEAR WALL GROUP 1 PILE CAP
1/4" = 1'-0"



NOTES:

1. IN PLAN INDICATES EXTENT OF 8'-0" THICK PILE CAP
2. CONCRETE STRENGTH: F'c = 6000 PSI
3. TOP OF PILE CAP ELEVATION = 10'-6"

2 / S1.01 SHEAR WALL GROUP 4 PILE CAP
1/4" = 1'-0"

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PILE CAP PLANS

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checked by:	JGB
scale:	1/4" = 1'-0"
project number:	MRA 18408.11/BHC 10120.00
	scaled inch

sheet number

S4.01

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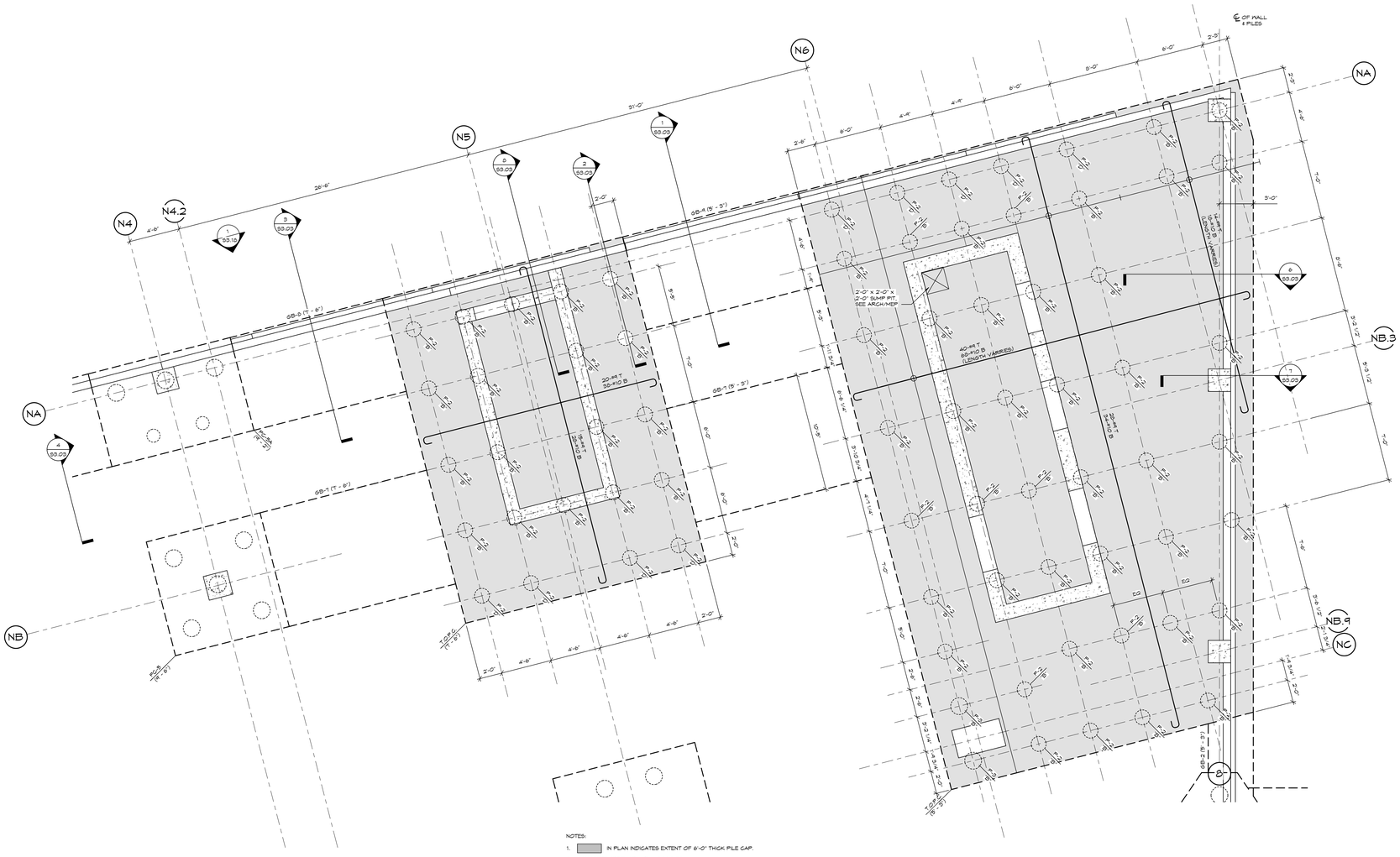

NOTES:

1. IN PLAN INDICATES EXTENT OF 6'-0" THICK PILE CAP.
2. CONCRETE STRENGTH: F'c = 8000 PSI
3. TOP OF PILE CAP ELEVATION VARRIES, SEE PLAN

SHEAR WALL GROUPS 2 & 3 PILE CAPS

S1.01b 1/4" = 1'-0"

PILE CAP WATERPROOFING NOTES:

1. WATERPROOF PILE CAPS WHERE BOTTOM OF PILE CAP EXTENDS BELOW ELEVATION 3.0' IN ACCORDANCE WITH DDP SECTION 5.2.2.
2. APPLIES TO PILE CAPS AT SHEAR WALL GROUPS 2, 3, & 7, AND ANY OTHER PILE CAPS WITH A BOTTOM OF PILE CAP ELEVATION LOWER THAN ELEVATION 3.0'.
3. EXTENT WATERPROOFING UP SIDES OF CAPS A MINIMUM OF 1'-0" ABOVE ELEVATION 3.0'.

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project
PARCEL 4 APARTMENT AND GARAGE

1402 POINT STREET
BALTIMORE, MD 21231

seal

DDP SUBMISSION

issued	date	description
	08/02/2021	Permit Set
	09/29/2021	DDP Submission
	11/01/2021	Check Set
1	11/16/2021	PILE REVISION
	01/12/2022	DDP Set

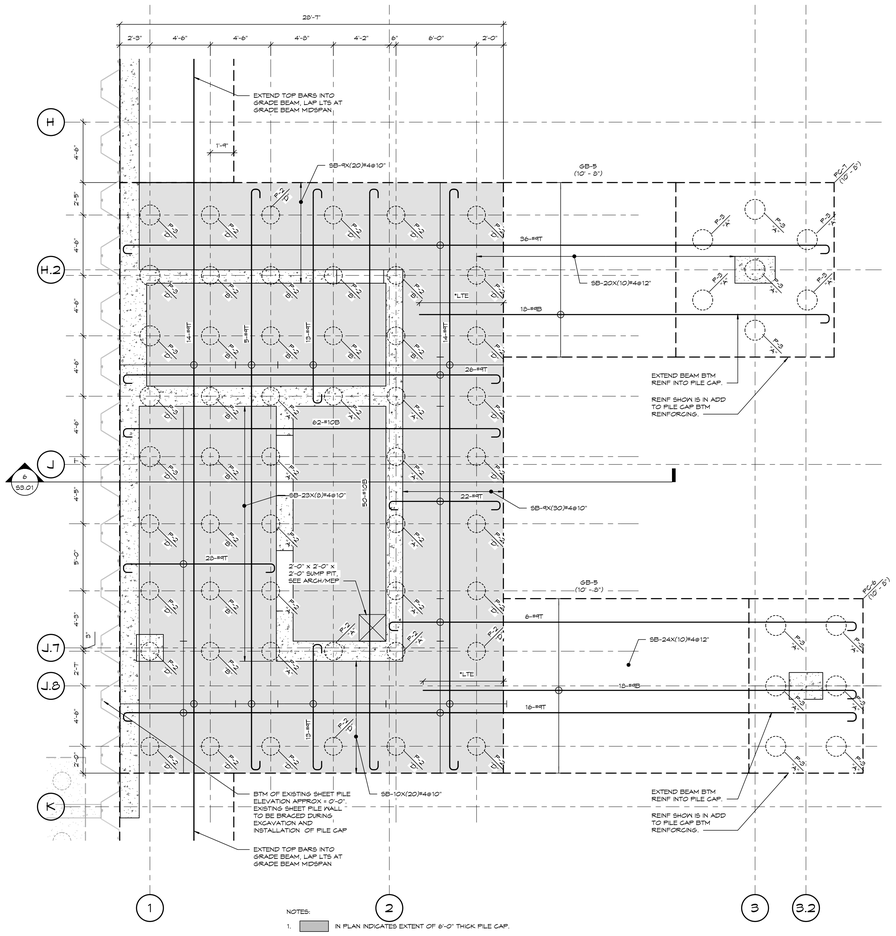
title

PILE CAP PLANS

drawn by:	RJA
checked by:	JGB
scale:	1/4" = 1'-0"
project number:	MRA 18408.11/BHC 10120.00
	scaled inch

sheet number

S4.02

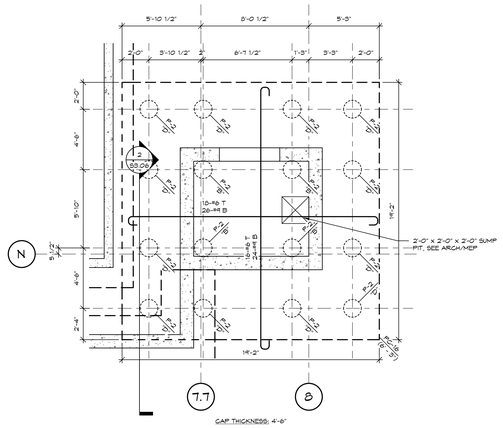


NOTES:

1. IN PLAN INDICATES EXTENT OF 6'-0" THICK PILE CAP.
2. CONCRETE STRENGTH: Fc = 6000 PSI
3. TOP OF PILE CAP ELEVATION = 10'-6"
4. SEE TYPICAL DETAILS FOR SHEAR BAR PLACING DETAIL WITHIN MAT PILE CAPS. TYPICAL SHEAR BAR CALLOUTS IN PLAN ARE AS FOLLOWS: SB-9x(12)#4@9"

SHEAR BAR INDICATOR — NO. OF ROWS SHEAR BARS — SPACING BETWEEN ROWS — BAR SIZE — NO. BARS PER ROW

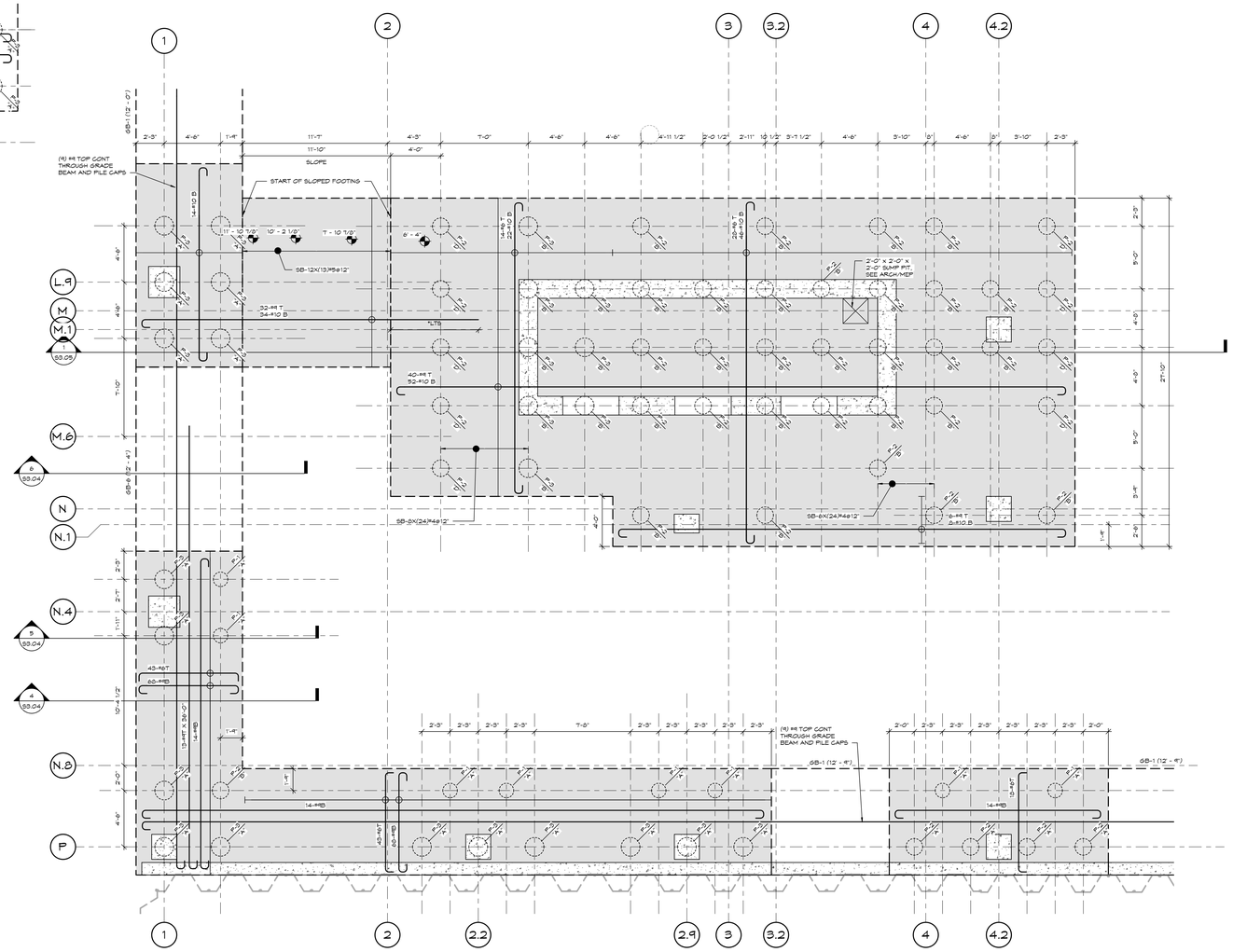
1 / S1.01B SHEAR WALL GROUP 5 PILE CAP
1/4" = 1'-0"



CAP THICKNESS: 4'-6"

CONCRETE STRENGTH: F'c = 6000 PSI

2 / S1.01B SHEAR WALL GROUP 7 PILE CAP
1/4" = 1'-0"



PILE CAP WATERPROOFING NOTES:

1. WATERPROOF PILE CAPS WHERE BOTTOM OF PILE CAP EXTENDS BELOW ELEVATION 3.0' IN ACCORDANCE WITH DDP SECTION 9.2.2.
2. APPLIES TO PILE CAPS AT SHEAR WALL GROUPS 2, 3, 6 & 7, AND ANY OTHER PILE CAPS WITH A BOTTOM OF PILE CAP ELEVATION LOWER THAN ELEVATION 3.0'.
3. EXTENT WATERPROOFING UP SIDES OF CAPS A MINIMUM OF 1'-0" ABOVE ELEVATION 3.0'.

3 / S1.01B SHEAR WALL GROUP 6 PILE CAP
1/4" = 1'-0"

NOTES:

1. IN PLAN INDICATES EXTENT OF 6'-0" THICK PILE CAP.
2. CONCRETE STRENGTH: Fc = 6000 PSI
3. TOP OF PILE CAP ELEVATION VARRIES, SEE PLAN
4. SEE TYPICAL DETAILS FOR SHEAR BAR PLACING DETAIL WITHIN MAT PILE CAPS. TYPICAL SHEAR BAR CALLOUTS IN PLAN ARE AS FOLLOWS: SB-9x(12)#4@9"

SHEAR BAR INDICATOR — NO. OF ROWS SHEAR BARS — SPACING BETWEEN ROWS — BAR SIZE — NO. BARS PER ROW

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	11/01/2021	Check Set

title

PILE CAP PLANS

drawn by:	RJA
checked by:	JGB
scale:	1/4" = 1'-0"
project number:	MRA 18408.11/BHC 10120.00
	scaled inch

sheet number

S4.03

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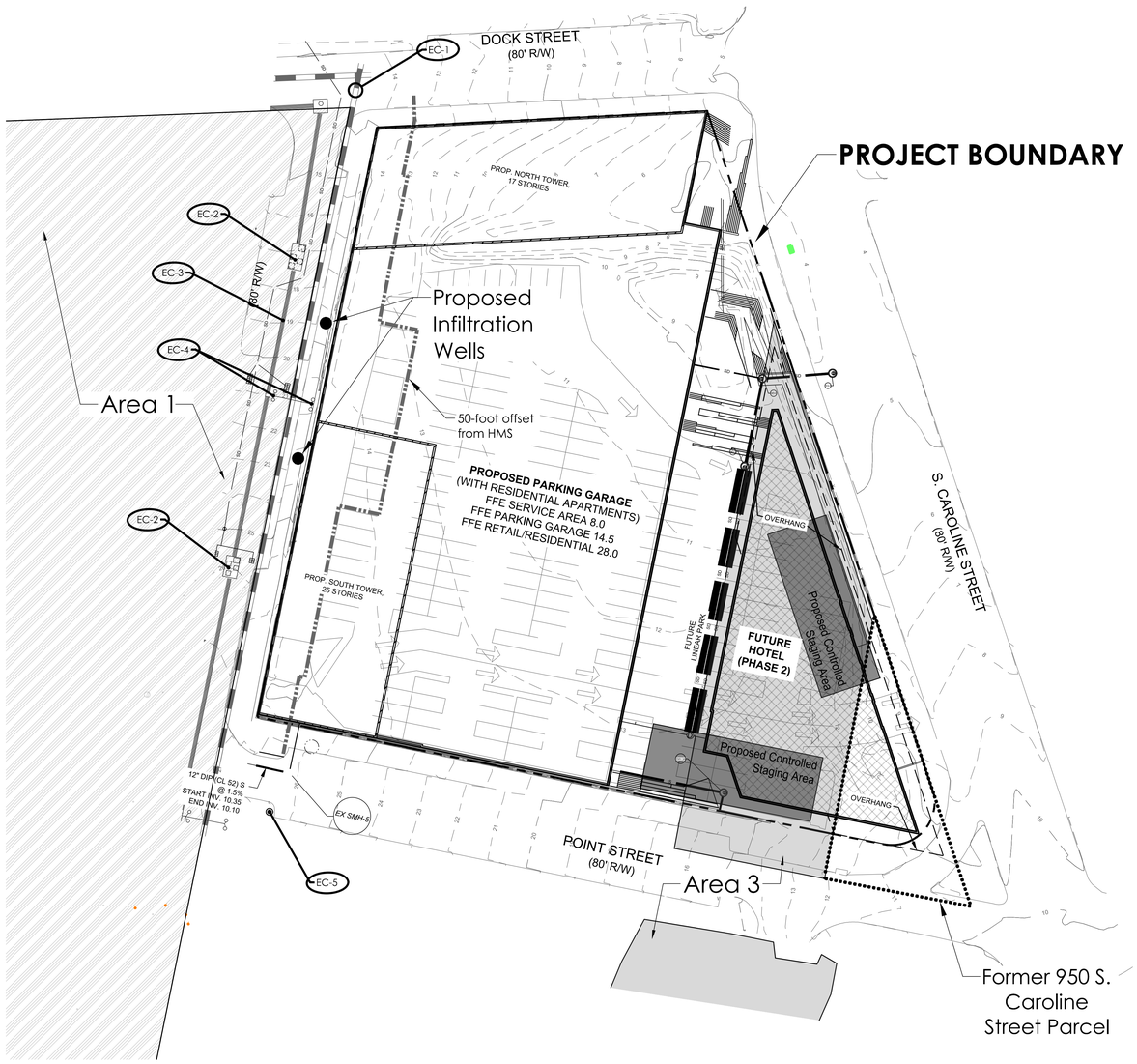


SCALE: 1" = 30'

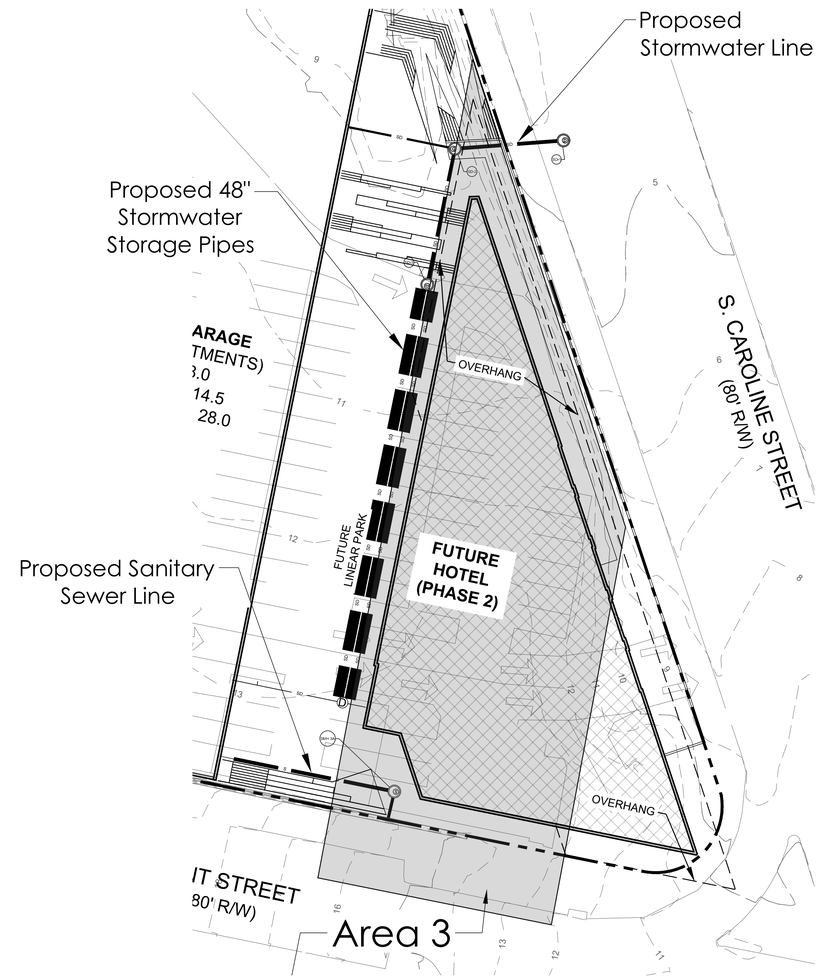
BLDG GRID NORTH

GENERAL NOTES

1. EXISTING TOPOGRAPHIC SITE FEATURES SUCH AS BUILDINGS, ROADS, PROPERTY BOUNDARIES, FENCE LINES, SHORELINE PERIMETER, ETC. ARE BASED ON DRAWINGS RECEIVED FROM RK&K ON AUGUST 3, 2021.
2. PROPOSED DEVELOPMENT IS BASED ON DRAWINGS RECEIVED FROM RK&K ON AUGUST 3, 2021.
3. THIS PLAN WAS PREPARED AS PART OF A DETAILED DEVELOPMENT PLAN (DDP) FOR THE PROPOSED CONSTRUCTION ACTIVITIES ON PARCEL 4 AT HARBOR POINT.
4. THE CONTROLLED STAGING AND STOCKPILE AREAS ARE OUTLINED FOR EXCESS SOILS AND FRAC TANKS DURING CONSTRUCTION OF GARAGE.
5. SEE THE OTHER DDP DRAWING SHEETS FOR DESIGN INFORMATION REGARDING OTHER ASPECTS OF THE PROJECT.
6. HORIZONTAL AND VERTICAL DATUM ARE BASED ON THE BALTIMORE CITY METROPOLITAN DATUM.
7. ALL EXISTING UTILITY STRUCTURE SURFACE FEATURES (INLETS, MANHOLES, ETC.) WITHIN THE LIMITS OF WORK AND TO REMAIN SHALL BE ADJUSTED TO FINISHED GRADE UNLESS OTHERWISE NOTED.
8. ALL EXISTING FEATURES OUTSIDE THE PROJECT LIMITS ARE TO REMAIN, UNLESS OTHERWISE NOTED.
9. THIS WORK SHALL NOT INTERFERE WITH THE ERS COMPONENTS.
10. THE PROPOSED INFILTRATION WELLS WILL BE INSTALLED PRIOR TO PILE DRIVING.

ENVIRONMENTAL CONTROLS NOTES

- EC-1 EXISTING SOIL BENTONITE HYDRAULIC BARRIER (REINFORCED WITH DRIVEN SHEET PILES) TO REMAIN UNDISTURBED.
- EC-2 EXISTING HEAD MAINTENANCE SYSTEM VAULTS TO REMAIN UNDISTURBED.
- EC-3 EXISTING HEAD MAINTENANCE SYSTEM CONVEYANCE PIPE SYSTEM TO REMAIN UNDISTURBED.
- EC-4 EXISTING INBOARD AND OUTBOARD PIEZOMETERS AND OTHER PORTIONS OF THE HEAD MAINTENANCE SYSTEM TO REMAIN UNDISTURBED.
- EC-5 EXISTING INFILTRATION WELL TO REMAIN UNDISTURBED.



AREA 3 DETAIL

SCALE: 1" = 20'

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	10/01/2021	DDP Set
	11/01/2021	DDP Set

title
ENVIRONMENTAL CONTROLS PLAN

drawn by:	SC
checked by:	SJS
scale:	SEE INSETS
project number:	10120.00
	scaled inch

sheet number
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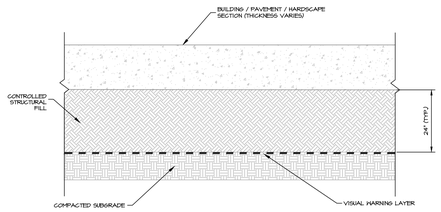
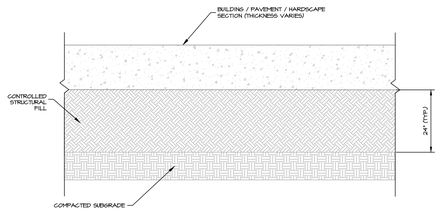
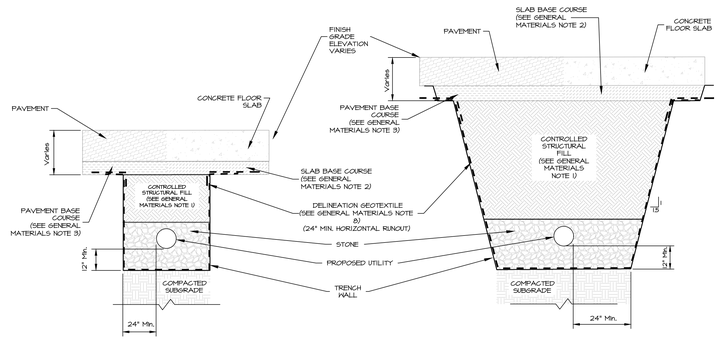


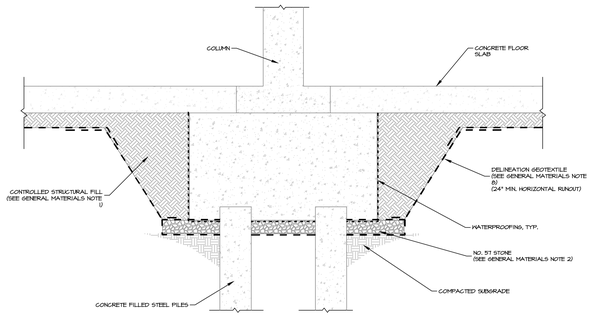
A **EXISTING SOIL CAP - AREA 3 (TYP.)**
NOT TO SCALE



B **EXISTING SOIL CAP - NON-DESIGNATED AREAS (TYP.)**
NOT TO SCALE



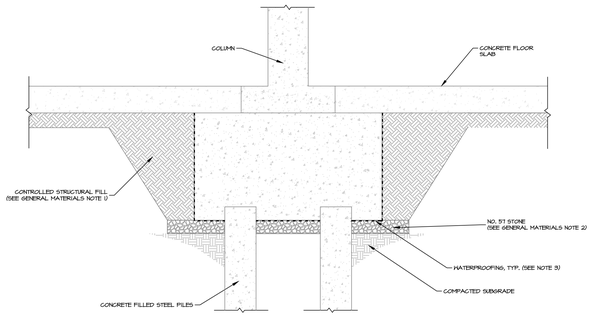
G **PROPOSED UTILITY CORRIDORS**
NOT TO SCALE



NOTES:

1. EXCAVATION PROCEDURES AND SOIL MANAGEMENT WILL BE ADDRESSED IN THE APPROVED EXCAVATION PLAN, EXCAVATIONS WILL BE DEWATERED AS NECESSARY WITH WATER BEING STORED IN TEMPORARY FRAC TANKS FOR TESTING TO DETERMINE IF IT MEETS DISCHARGE CRITERIA OR MUST BE MANAGED AS A WASTE REQUIRING OFF-SITE TRANSPORTATION AND DISPOSAL.
2. EXCAVATIONS SHALL BE SIZED SUCH THAT THE MINIMUM LATERAL DIMENSIONS AT THE BOTTOM OF EXCAVATION ARE SUFFICIENT FOR PLACEMENT OF GEOTEXTILES AND FOUNDATION FORM WORK. EXCAVATION SIDEWALLS SHALL BE SLOPED AND SHAPED TO FACILITATE PLACEMENT OF THE GEOSYNTHETICS.
3. CUT AND REMOVE GEOTEXTILE AT PILE PENETRATION IN PILE CAP.
4. DUE CARE SHALL BE TAKEN DURING PILE CAP CONSTRUCTION AND SUBSEQUENT BACKFILLING OF THE EXCAVATION TO PROTECT THE GEOTEXTILES FROM CONSTRUCTION-RELATED DAMAGE.

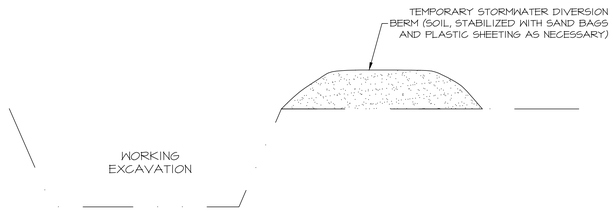
C **COVER SYSTEM BELOW FOUNDATIONS - AREA 3**
NOT TO SCALE



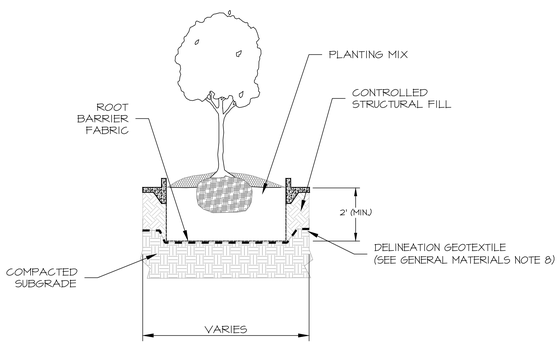
NOTES:

1. EXCAVATION PROCEDURES AND SOIL MANAGEMENT WILL BE ADDRESSED IN THE APPROVED EXCAVATION PLAN, EXCAVATIONS WILL BE DEWATERED AS NECESSARY WITH WATER BEING STORED IN TEMPORARY FRAC TANKS FOR TESTING TO DETERMINE IF IT MEETS DISCHARGE CRITERIA OR MUST BE MANAGED AS A WASTE REQUIRING OFF-SITE TRANSPORTATION AND DISPOSAL.
2. EXCAVATIONS SHALL BE SIZED SUCH THAT THE MINIMUM LATERAL DIMENSIONS AT THE BOTTOM OF EXCAVATION ARE SUFFICIENT FOR PLACEMENT OF GEOTEXTILES AND FOUNDATION FORM WORK. EXCAVATION SIDEWALLS SHALL BE SLOPED AND SHAPED TO FACILITATE PLACEMENT OF THE GEOSYNTHETICS.
3. WATERPROOFING TO BE APPLIED TO ANY PILE CAPS THAT EXTEND BELOW THE SEASONAL HIGH WATER TABLE (EL. +3.0).

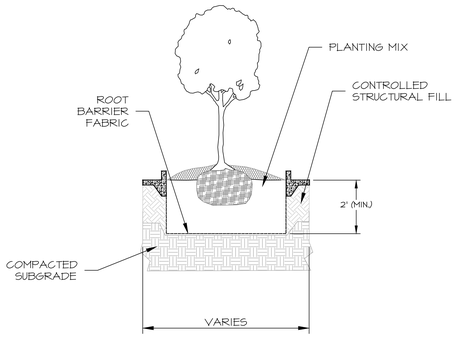
D **COVER SYSTEM BELOW FOUNDATIONS - NON-DESIGNATED AREAS**
NOT TO SCALE



H **BERMED EXCAVATION SKETCH**
NOT TO SCALE



E **TYPICAL PROPOSED PLANTER DETAIL - AREA 3**
NOT TO SCALE



F **TYPICAL PROPOSED PLANTER DETAIL - NON-DESIGNATED AREAS**
NOT TO SCALE

GENERAL MATERIALS NOTES:

1. CONTROLLED STRUCTURAL FILL SHALL CONSIST OF GRANULAR SOIL, FREE OF FROZEN, ORGANIC, OR OTHER DELETERIOUS MATERIALS, WHICH MEETS THE AASHTO CLASSIFICATION OF A-2-4 OR MORE GRANULAR. CONTROLLED STRUCTURAL FILL PLACED WITHIN THE TOP 12 INCHES OF PAVEMENT SUBGRADE SHALL BE COMPACTED TO A MINIMUM 97% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557, AASHTO T180). ALL OTHER CONTROLLED STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST.
2. SLAB BASE COURSE AND ALL OTHER REFERENCE TO NO. 57 STONE SHALL MEET THE REQUIREMENTS FOR NO. 57 STONE AS SPECIFIED IN THE MARYLAND DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
3. PAVEMENT BASE COURSE SHALL MEET THE REQUIREMENTS FOR GRADED AGGREGATE BASE (GAB) AS SPECIFIED IN THE MARYLAND DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
4. STONE PRODUCTS SHOULD BE STORED IN STOCKPILES SEGREGATED FROM OTHER MATERIALS. STONE STOCKPILES SHOULD BE PROTECTED FROM MUD.
5. ALL STRUCTURAL FILL, SLAB BASE COURSE, PAVEMENT BASE COURSE, OTHER STONE PRODUCTS, AND ANY OTHER IMPORTED FILL PLACED ABOVE THE GEOTEXTILE SHALL MEET THE CLEAN FILL REQUIREMENTS (AS SPECIFIED IN THE MATERIAL HANDLING AND MANAGEMENT PLAN).
6. DELINEATION GEOTEXTILE SHALL BE ORANGE, NON-WOVEN, POLYPROPYLENE GEOTEXTILE, MIRAFI 140N/O MANUFACTURED BY TENCATE OR APPROVED EQUIVALENT.
7. CARE SHOULD BE TAKEN TO AVOID DAMAGE TO GEOTEXTILES DURING UNLOADING AND ON-SITE TRANSPORT.
8. STORE GEOTEXTILES ON DUNNAGE OR PALLETS. GEOTEXTILES SHOULD NOT BE STORED DIRECTLY ON THE GROUND.
9. COVER GEOTEXTILES WHILE IN STORAGE TO PROTECT FROM WEATHER, ULTRAVIOLET RAYS, AND OTHER SOURCES OF DAMAGE.
10. GEOTEXTILE SHOULD BE INSPECTED FOR DAMAGE OR OTHER DEFECTS DURING PLACEMENT. ANY DAMAGED PORTIONS OF THE GEOTEXTILE SHOULD BE REPAIRED IN ACCORDANCE IWTH THE MANUFACTURER'S RECOMMENDATIONS.
11. EXPOSED GEOTEXTILE SHOULD NOT BE SUBJECTED TO VEHICULAR OR CONSTRUCTION TRAFFIC.

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title
ENVIRONMENTAL CONTROLS DETAILS

drawn by:	SC
checked by:	SJS
scale:	AS SHOWN
project number:	10120.00
	scaled inch

sheet number
EN1.02

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