Flexible Sequence of Construction for SHA Projects

Agenda

Registration	8:30-9:00
Opening & Introduction (Ginger Olyniec & Jeff Knaub)	9:00-9:30
Purpose of SOC (Ginger Olyniec)	9:30-10:00
Building the SOC (Ginger Olyniec)	10:00-10:45
Break	10:45-11:00
Sample Project (Jonathan Brown & Ryan Doran)	11:00-11:30
Special Situations (Ginger Olyniec)	11:30-1:30
Lunch	12:00-1:00
Break out sessions (Moderators)	1:30-2:45
Break	2:45 – 3:00
Wrap up (All hands)	3:00-3:30

House-keeping

1. Silence Phones
2. Questions at end of Sections and before breaks
3. Moderator Introductions
4. Breakout room assignments

Facilitators

FSOC Examples

Virginia Olyniec
Chief – SHA – OHD – HHD

Jeffrey Knaub
Chief – SHA – OHD - PRD

- Kirin Smith (SHA – OHD – HHD)
- Gina Goettler (Chief Eng. System – SHA – D5)
- Jonathan Brown (Area Engineer – SHA – D3)
- Ryan Doran (Area Engineer – SHA – D3)
- Barry Smith (Deputy Director – SHA – OHD)
- Brandon Scott (SHA – OHD – PRD)
- Alicia Brandys (SHA – OHD – PRD)
- Tesfa Bogale (SHA – OHD – PRD)
- Sonja Hardman (SHA – OHD – PRD)
- Natalie DeColli (Consultant – SuYash)
- Laura Ridler (Consultant – SuYash)
- Amanda Barrett (Consultant – RKK)

Resilient

Flexible Sequence of Construction:

Why Change?

resilience:

"an ability to recover from or adjust easily to misfortune or change."

-Merriam-Webster Dictionary

Why a Flexible Sequence of Construction

1. Build resilience into our projects to adapt to unforeseen circumstances
2. Better plans to control sediment runoff and erosion
3. Reduce the amount of time earth is exposed and vulnerable to erosion
4. Preempt change orders

- Clearing and grubbing as necessary for the installation of perimeter controls;
- Construction and stabilization of perimeter

"Do the work"

- Removal of controls and stabilization of resulting disturbances;

What is a Sequence of Construction?

COMAR SEC. 26.17.01.07 (Application for Approval of Erosion and Sediment Control Plans)

What is the **purpose** of Erosion and Sediment Control?

How does sediment transport impact downstream property owners?

How does sediment transport impact downstream waterways?




How do we keep sediment from leaving the site?

What are the consequences for failure?

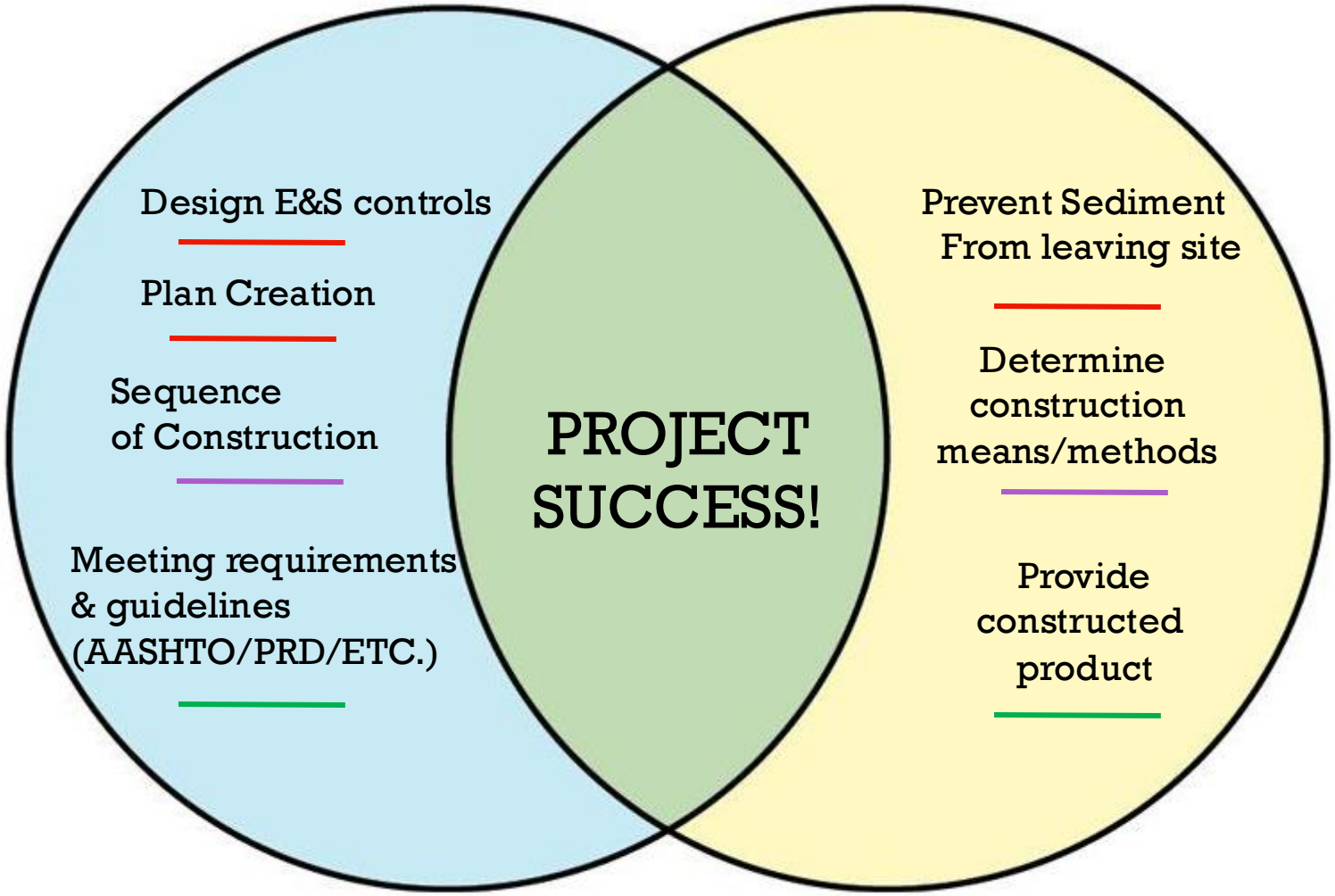
- Work stoppage

- Fines

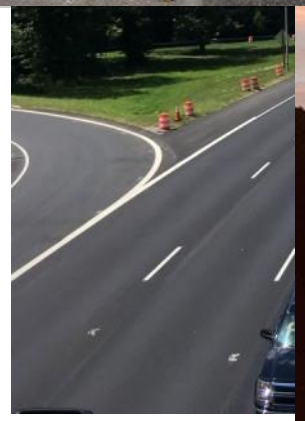
- Legal action

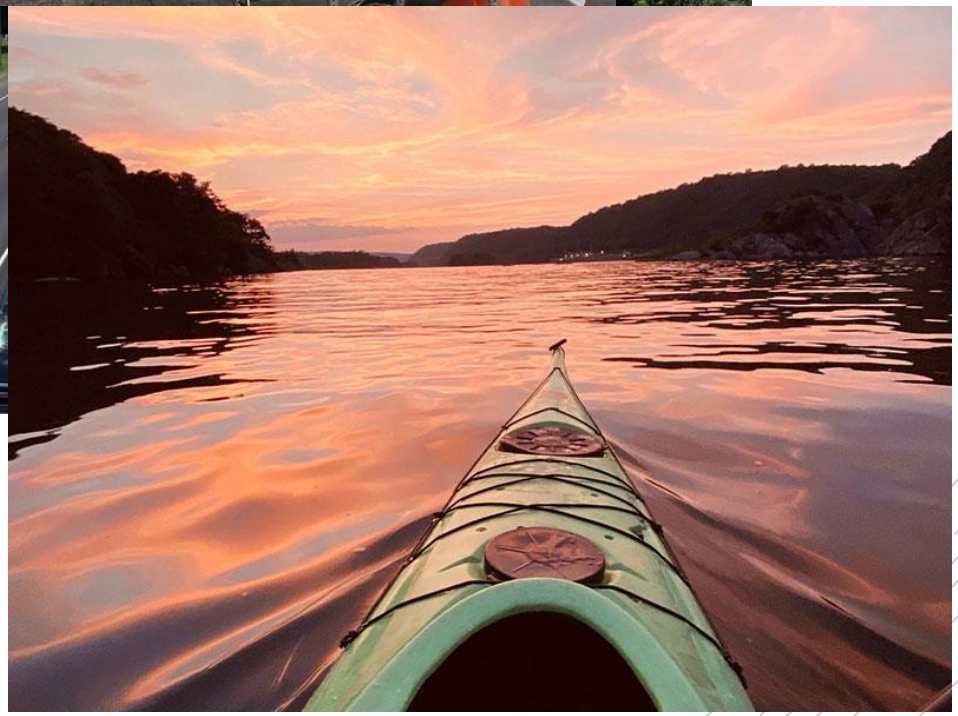
"But I'm not a contractor… how is this my problem?"

RESPONSIBILITY BREAKDOWN:



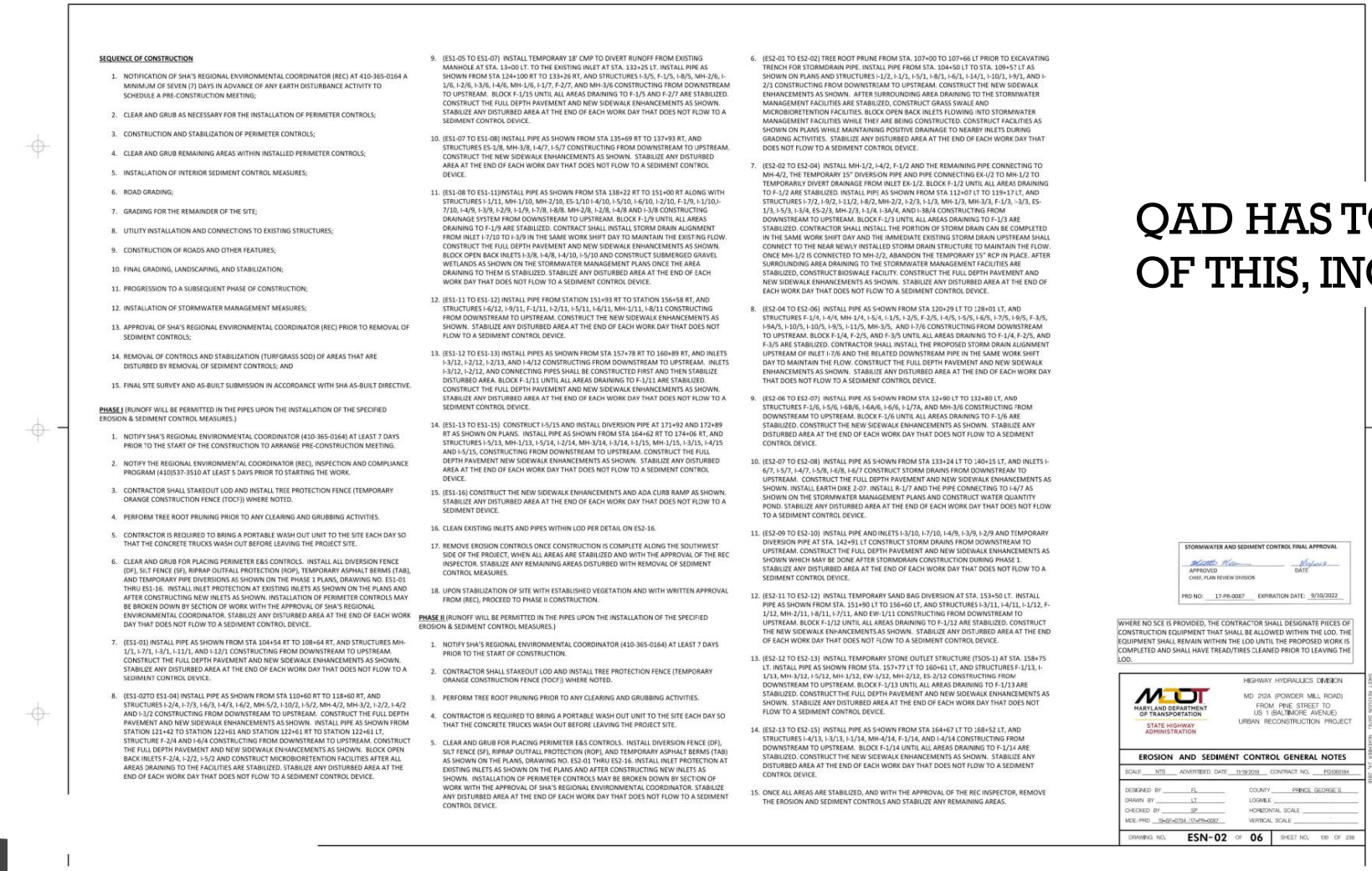
What is a successful project?





What are the problems with the Commonly used ESC Sequence of Construction?

- Limits Contractor's flexibility
- QAD is required to enforce EVERYTHING in the Sequence as part of Delegated Authority from MDE
- High number of toolkit modifications
  - Construction Issues/Stops
  - Schedule delays
  - Contractor claims



SEQUENCE OF CONSTRUCTION

1. NOTIFICATION OF SHA'S REGIONAL ENVIRONMENTAL COORDINATOR (REC) AT 410-365-0164 A MINIMUM OF SEVEN (7) DAYS IN ADVANCE OF ANY EARTH DISTURBANCE ACTIVITY TO SCHEDULE A PRE-CONSTRUCTION MEETING;
2. CLEAR AND GRUB AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS;
3. CONSTRUCTION AND STABILIZATION OF PERIMETER CONTROLS;
4. CLEAR AND GRUB REMAINING AREAS WITHIN INSTALLED PERIMETER CONTROLS;
5. INSTALLATION OF INTERIOR SEDIMENT CONTROL MEASURES;
6. ROAD GRADING;
7. GRADING FOR THE REMAINDER OF THE SITE;
8. UTILITY INSTALLATION AND CONNECTIONS TO EXISTING STRUCTURES;
9. CONSTRUCTION OF ROADS AND OTHER FEATURES;
10. FINAL GRADING, LANDSCAPING, AND STABILIZATION;
11. PROGRESSION TO A SUBSEQUENT PHASE OF CONSTRUCTION;
12. INSTALLATION OF STORMWATER MANAGEMENT MEASURES;
13. APPROVAL OF SHA'S REGIONAL ENVIRONMENTAL COORDINATOR (REC) PRIOR TO REMOVAL OF SEDIMENT CONTROLS;
14. REMOVAL OF CONTROLS AND STABILIZATION (TURFGRASS SOD) OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS; AND
15. FINAL SITE SURVEY AND AS-BUILT SUBMISSION IN ACCORDANCE WITH SHA AS-BUILT DIRECTIVE.

PHASE I (RUNOFF WILL BE PERMITTED IN THE PIPES UPON THE INSTALLATION OF THE SPECIFIED EROSION & SEDIMENT CONTROL MEASURES.)

1. NOTIFY SHA'S REGIONAL ENVIRONMENTAL COORDINATOR (410-365-0164) AT LEAST 7 DAYS PRIOR TO THE START OF THE CONSTRUCTION TO ARRANGE PRE-CONSTRUCTION MEETING.
2. NOTIFY THE REGIONAL ENVIRONMENTAL COORDINATOR (REC), INSPECTION AND COMPLIANCE PROGRAM (410)537-3510 AT LEAST 5 DAYS PRIOR TO STARTING THE WORK.
3. CONTRACTOR SHALL STAKEOUT LOD AND INSTALL TREE PROTECTION FENCE (TEMPORARY ORANGE CONSTRUCTION FENCE (TOCF)) WHERE NOTED.
4. PERFORM TREE ROOT PRUNING PRIOR TO ANY CLEARING AND GRUBBING ACTIVITIES.
5. CONTRACTOR IS REQUIRED TO BRING A PORTABLE WASH OUT UNIT TO THE SITE EACH DAY SO THAT THE CONCRETE TRUCKS WASH OUT BEFORE LEAVING THE PROJECT SITE.
6. CLEAR AND GRUB FOR PLACING PERIMETER E&S CONTROLS. INSTALL ALL DIVERSION FENCE (DF), SILT FENCE (SF), RIPRAP OUTFALL PROTECTION (ROP), TEMPORARY ASPHALT BERMS (TAB), AND TEMPORARY PIPE DIVERSIONS AS SHOWN ON THE PHASE 1 PLANS, DRAWING NO. ES1-01 THRU ES1-16. INSTALL INLET PROTECTION AT EXISTING INLETS AS SHOWN ON THE PLANS AND AFTER CONSTRUCTING NEW INLETS AS SHOWN. INSTALLATION OF PERIMETER CONTROLS MAY BE BROKEN DOWN BY SECTION OF WORK WITH THE APPROVAL OF SHA'S REGIONAL ENVIRONMENTAL COORDINATOR. STABLIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
7. (ES1-01) INSTALL PIPE AS SHOWN FROM STA 104+54 RT TO 108+64 RT, AND STRUCTURES MH-1/1, I-7/1, I-3/1, I-11/1, AND I-12/1 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
8. (ES1-02TO ES1-04) INSTALL PIPE AS SHOWN FROM STA 110+60 RT TO 118+60 RT, AND STRUCTURES I-2/4, I-7/3, I-6/3, I-4/3, I-6/2, MH-5/2, I-10/2, I-5/2, MH-4/2, MH-3/2, I-2/2, I-4/2 AND I-3/2 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. INSTALL PIPE AS SHOWN FROM STATION 121+42 TO STATION 122+61 AND STATION 122+61 RT TO STATION 122+61 LT, STRUCTURE F-2/4 AND I-6/4 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. BLOCK OPEN BACK INLETS F-2/4, I-2/2, I-5/2 AND CONSTRUCT MICROBIORETENTION FACILITIES AFTER ALL AREAS DRAINING TO THE FACILITIES ARE STABILIZED. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
9. (ES1-05 TO ES1-07) INSTALL TEMPORARY 18' CMP TO DIVERT RUNOFF FROM EXISTING MANHOLE AT STA. 13+00 LT. TO THE EXISTING INLET AT STA. 132+25 LT. INSTALL PIPE AS SHOWN FROM STA 124+100 RT TO 133+26 RT, AND STRUCTURES I-3/5, F-1/5, I-8/5, MH-2/6, I-1/6, I-2/6, I-3/6, I-4/6, MH-1/6, I-1/7, F-2/7, AND MH-3/6 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. BLOCK F-1/15 UNTIL ALL AREAS DRAINING TO F-1/5 AND F-2/7 ARE STABILIZED. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
10. (ES1-07 TO ES1-08) INSTALL PIPE AS SHOWN FROM STA 135+69 RT TO 137+93 RT, AND STRUCTURES ES-1/8, MH-3/8, I-4/7, I-5/7 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
11. (ES1-08 TO ES1-11)INSTALL PIPE AS SHOWN FROM STA 138+22 RT TO 151+00 RT ALONG WITH STRUCTURES I-1/11, MH-1/10, MH-2/10, ES-1/10 I-4/10, I-5/10, I-6/10, I-2/10, F-1/9, I-1/10,I-7/10, I-4/9, I-3/9, I-2/9, I-1/9, I-7/8, I-8/8. MH-2/8, I-2/8, I-4/8 AND I-3/8 CONSTRUCTING DRAINAGE SYSTEM FROM DOWNSTREAM TO UPSTREAM. BLOCK F-1/9 UNTIL ALL AREAS DRAINING TO F-1/9 ARE STABILIZED. CONTRACT SHALL INSTALL STORM DRAIN ALIGNMENT FROM INLET I-7/10 TO I-3/9 IN THE SAME WORK SHIFT DAY TO MAINTAIN THE EXISTING FLOW. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. BLOCK OPEN BACK INLETS I-3/8, I-4/8, I-4/10, I-5/10 AND CONSTRUCT SUBMERGED GRAVEL WETLANDS AS SHOWN ON THE STORMWATER MANAGEMENT PLANS ONCE THE AREA DRAINING TO THEM IS STABILIZED. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
12. (ES1-11 TO ES1-12) INSTALL PIPE FROM STATION 151+93 RT TO STATION 156+58 RT, AND STRUCTURES I-6/12, I-9/11, F-1/11, I-2/11, I-5/11, I-6/11, MH-1/11, I-8/11 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
13. (ES1-12 TO ES1-13) INSTALL PIPES AS SHOWN FROM STA 157+78 RT TO 160+89 RT, AND INLETS I-3/12, I-2/12, I-2/13, AND I-4/12 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INLETS I-3/12, I-2/12, AND CONNECTING PIPES SHALL BE CONSTRUCTED FIRST AND THEN STABILIZE DISTURBED AREA. BLOCK F-1/11 UNTIL ALL AREAS DRAINING TO F-1/11 ARE STABILIZED. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
14. (ES1-13 TO ES1-15) CONSTRUCT I-5/15 AND INSTALL DIVERSION PIPE AT 171+92 AND 172+89 RT AS SHOWN ON PLANS. INSTALL PIPE AS SHOWN FROM STA 164+62 RT TO 174+06 RT, AND STRUCTURES I-5/13, MH-1/13, I-5/14, I-2/14, MH-3/14, I-3/14, I-1/15, MH-1/15, I-3/15, I-4/15 AND I-5/15, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. CONSTRUCT THE FULL DEPTH PAVEMENT NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
15. (ES1-16) CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AND ADA CURB RAMP AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT DEVICE.
16. CLEAN EXISTING INLETS AND PIPES WITHIN LOD PER DETAIL ON ES2-16.
17. REMOVE EROSION CONTROLS ONCE CONSTRUCTION IS COMPLETE ALONG THE SOUTHWEST SIDE OF THE PROJECT, WHEN ALL AREAS ARE STABILIZED AND WITH THE APPROVAL OF THE REC INSPECTOR. STABILIZE ANY REMAINING AREAS DISTURBED WITH REMOVAL OF SEDIMENT CONTROL MEASURES.
18. UPON STABILIZATION OF SITE WITH ESTABLISHED VEGETATION AND WITH WRITTEN APPROVAL FROM (REC), PROCEED TO PHASE II CONSTRUCTION.

PHASE II (RUNOFF WILL BE PERMITTED IN THE PIPES UPON THE INSTALLATION OF THE SPECIFIED EROSION & SEDIMENT CONTROL MEASURES.)

1. NOTIFY SHA'S REGIONAL ENVIRONMENTAL COORDINATOR (410-365-0164) AT LEAST 7 DAYS PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR SHALL STAKEOUT LOD AND INSTALL TREE PROTECTION FENCE (TEMPORARY ORANGE CONSTRUCTION FENCE (TOCF)) WHERE NOTED.
3. PERFORM TREE ROOT PRUNING PRIOR TO ANY CLEARING AND GRUBBING ACTIVITIES.
4. CONTRACTOR IS REQUIRED TO BRING A PORTABLE WASH OUT UNIT TO THE SITE EACH DAY SO THAT THE CONCRETE TRUCKS WASH OUT BEFORE LEAVING THE PROJECT SITE.
5. CLEAR AND GRUB FOR PLACING PERIMETER E&S CONTROLS. INSTALL DIVERSION FENCE (DF), SILT FENCE (SF), RIPRAP OUTFALL PROTECTION (ROP), AND TEMPORARY ASPHALT BERMS (TAB) AS SHOWN ON THE PLANS, DRAWING NO. ES2-01 THRU ES2-16. INSTALL INLET PROTECTION AT EXISTING INLETS AS SHOWN ON THE PLANS AND AFTER CONSTRUCTING NEW INLETS AS SHOWN. INSTALLATION OF PERIMETER CONTROLS MAY BE BROKEN DOWN BY SECTION OF WORK WITH THE APPROVAL OF SHA'S REGIONAL ENVIRONMENTAL COORDINATOR. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
6. (ES2-01 TO ES2-02) TREE ROOT PRUNE FROM STA. 107+00 TO 107+66 LT PRIOR TO EXCAVATING TRENCH FOR STORMDRAIN PIPE. INSTALL PIPE FROM STA. 104+50 LT TO STA. 109+57 LT AS SHOWN ON PLANS AND STRUCTURES I-1/2, I-1/1, I-5/1, I-8/1, I-6/1, I-14/1, I-10/1, I-9/1, AND I-2/1 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. AFTER SURROUNDING AREA DRAINING TO THE STORMWATER MANAGEMENT FACILITIES ARE STABILIZED, CONSTRUCT GRASS SWALE AND MICROBIORETENTION FACILITIES. BLOCK OPEN BACK INLETS FLOWING INTO STORMWATER MANAGEMENT FACILITIES WHILE THEY ARE BEING CONSTRUCTED. CONSTRUCT FACILITIES AS SHOWN ON PLANS WHILE MAINTAINING POSITIVE DRAINAGE TO NEARBY INLETS DURING GRADING ACTIVITIES. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
7. (ES2-02 TO ES2-04) INSTALL MH-1/2, I-4/2, F-1/2 AND THE REMAINING PIPE CONNECTING TO MH-4/2, THE TEMPORARY 15" DIVERSION PIPE AND PIPE CONNECTING EX-I/2 TO MH-1/2 TO TEMPORARILY DIVERT DRAINAGE FROM INLET EX-1/2. BLOCK F-1/2 UNTIL ALL AREAS DRAINING TO F-1/2 ARE STABILIZED. INSTALL PIPE AS SHOWN FROM STA 112+07 LT TO 119+17 LT, AND STRUCTURES I-7/2, I-9/2, I-11/2, I-8/2, MH-2/2, I-2/3, I-1/3, MH-1/3, MH-3/3, F-1/3, I-3/3, ES-1/3, I-5/3, I-3/4, ES-2/3, MH-2/3, I-1/4, I-3A/4, AND I-3B/4 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. BLOCK F-1/3 UNTIL ALL AREAS DRAINING TO F-1/3 ARE STABILIZED. CONTRACTOR SHALL INSTALL THE PORTION OF STORM DRAIN CAN BE COMPLETED IN THE SAME WORK SHIFT DAY AND THE IMMEDIATE EXISTING STORM DRAIN UPSTREAM SHALL CONNECT TO THE NEAR NEWLY INSTALLED STORM DRAIN STRUCTURE TO MAINTAIN THE FLOW. ONCE MH-1/2 IS CONNECTED TO MH-2/2, ABANDON THE TEMPORARY 15" RCP IN PLACE. AFTER SURROUNDING AREA DRAINING TO THE STORMWATER MANAGEMENT FACILITIES ARE STABILIZED, CONSTRUCT BIOSWALE FACILITY. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
8. (ES2-04 TO ES2-06) INSTALL PIPE AS SHOWN FROM STA 120+29 LT TO 128+01 LT, AND STRUCTURES F-1/4, I-4/4, MH-1/4, I-5/4, I-1/5, I-2/5, F-2/5, I-4/5, I-5/5, I-6/5, I-7/5, I-9/5, F-3/5, I-9A/5, I-10/5, I-10/5, I-9/5, I-11/5, MH-3/5, AND I-7/6 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. BLOCK F-1/4, F-2/5, AND F-3/5 UNTIL ALL AREAS DRAINING TO F-1/4, F-2/5, AND F-3/5 ARE STABILIZED. CONTRACTOR SHALL INSTALL THE PROPOSED STORM DRAIN ALIGNMENT UPSTREAM OF INLET I-7/6 AND THE RELATED DOWNSTREAM PIPE IN THE SAME WORK SHIFT DAY TO MAINTAIN THE FLOW. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
9. (ES2-06 TO ES2-07) INSTALL PIPE AS SHOWN FROM STA 12+90 LT TO 132+80 LT, AND STRUCTURES F-1/6, I-5/6, I-6B/6, I-6A/6, I-6/6, I-1/7A, AND MH-3/6 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. BLOCK F-1/6 UNTIL ALL AREAS DRAINING TO F-1/6 ARE STABILIZED. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
10. (ES2-07 TO ES2-08) INSTALL PIPE AS SHOWN FROM STA 133+24 LT TO 140+15 LT, AND INLETS I-6/7, I-5/7, I-4/7, I-5/8, I-6/8, I-6/7 CONSTRUCT STORM DRAINS FROM DOWNSTREAM TO UPSTREAM. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. INSTALL EARTH DIKE 2-07. INSTALL R-1/7 AND THE PIPE CONNECTING TO I-6/7 AS SHOWN ON THE STORMWATER MANAGEMENT PLANS AND CONSTRUCT WATER QUANTITY POND. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
11. (ES2-09 TO ES2-10) INSTALL PIPE AND INLETS I-3/10, I-7/10, I-4/9, I-3/9, I-2/9 AND TEMPORARY DIVERSION PIPE AT STA. 142+91 LT CONSTRUCT STORM DRAINS FROM DOWNSTREAM TO UPSTREAM. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN WHICH MAY BE DONE AFTER STORMDRAIN CONSTRUCTION DURING PHASE 1. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
12. (ES2-11 TO ES2-12) INSTALL TEMPORARY SAND BAG DIVERSION AT STA. 153+50 LT. INSTALL PIPE AS SHOWN FROM STA. 151+90 LT TO 156+60 LT, AND STRUCTURES I-3/11, I-4/11, I-1/12, F-1/12, MH-2/11, I-8/11, I-7/11, AND EW-1/11 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. BLOCK F-1/12 UNTIL ALL AREAS DRAINING TO F-1/12 ARE STABILIZED. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
13. (ES2-12 TO ES2-13) INSTALL TEMPORARY STONE OUTLET STRUCTURE (TSOS-1) AT STA. 158+75 LT. INSTALL PIPE AS SHOWN FROM STA. 157+77 LT TO 160+61 LT, AND STRUCTURES F-1/13, I-1/13, MH-3/12, I-5/12, MH-1/12, EW-1/12, MH-2/12, ES-2/12 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. BLOCK F-1/13 UNTIL ALL AREAS DRAINING TO F-1/13 ARE STABILIZED. CONSTRUCT THE FULL DEPTH PAVEMENT AND NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
14. (ES2-13 TO ES2-15) INSTALL PIPE AS SHOWN FROM STA 164+67 LT TO 168+52 LT, AND STRUCTURES I-4/13, I-3/13, I-1/14, MH-4/14, F-1/14, AND I-4/14 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. BLOCK F-1/14 UNTIL ALL AREAS DRAINING TO F-1/14 ARE STABILIZED. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
15. ONCE ALL AREAS ARE STABILIZED, AND WITH THE APPROVAL OF THE REC INSPECTOR, REMOVE THE EROSION AND SEDIMENT CONTROLS AND STABILIZE ANY REMAINING AREAS.

STORMWATER AND SEDIMENT CONTROL FINAL APPROVAL

APPROVED — DATE
CHIEF, PLAN REVIEW DIVISION

PRD NO: 17-PR-0087 EXPIRATION DATE: 9/10/2022

WHERE NO SCE IS PROVIDED, THE CONTRACTOR SHALL DESIGNATE PIECES OF CONSTRUCTION EQUIPMENT THAT SHALL BE ALLOWED WITHIN THE LOD. THE EQUIPMENT SHALL REMAIN WITHIN THE LOD UNTIL THE PROPOSED WORK IS COMPLETED AND SHALL HAVE TREAD/TIRES CLEANED PRIOR TO LEAVING THE LOD.

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

HIGHWAY HYDRAULICS DIVISION
MD 212A (POWDER MILL ROAD)
FROM PINE STREET TO
US 1 (BALTIMORE AVENUE)
URBAN RECONSTRUCTION PROJECT

EROSION AND SEDIMENT CONTROL GENERAL NOTES

SCALE: NTS ADVERTISED DATE: 11/19/2019 CONTRACT NO.: FD106184

DESIGNED BY: FL COUNTY: PRINCE GEORGE'S
DRAWN BY: LT LOGMILE:
CHECKED BY: SP HORIZONTAL SCALE:
MDE/PRD: 15-SF-0704 /17-PR-0087 VERTICAL SCALE:

DRAWING NO. ESN-02 OF 06 SHEET NO. 130 OF 238

SHEET REVISION DATED NOVEMBER 24, 2020

QAD HAS TO ENFORCE ALL OF THIS, INCLUDING ORDER!

Common Sequence of Construction

How did we get here: A History Lesson

How does this cause issues? An example:

- Early step in sequence calls for pipes to be installed
- Pipe is on backorder and cannot be obtained from supplier
- Contractor cannot move on to other work, as sequence specifies pipes need to be installed first. They submit a toolkit mod to change the sequence.
- While waiting for review of mod, construction is stopped
- Schedule is delayed, and contractor asks for an extra to cover unanticipated costs

LESSONS LEARNED

- Avoid tying ESC sequence to MOT phases
- Constructability Issues
- Concurrent utility/developer work conflicting with ESC SOC

Terminology

- **Phase(s) or Phasing:** a distinct period in a series of events or a process of change or development. Construction Phasing: Allows a project to be completed in distinct segments rather than all at once.
- **MOT Phasing:** Establishes temporary conditions to keep the travel ways safe during construction and maintenance or utility work. NOT ESC
- **Work Areas:** sub-areas within each project to simplify erosion and sediment control sequencing.
  - Clarifies when an area is available for work to commence.
  - Constraints are more easily identified and shown on specific plan sheets, not in the Sequence of Construction.
  - Areas are designated based on geography or drainage pattern.
  - Not all projects will require work areas.
- **Stage:** A sub-work area. Stages are used for complicated sequencing that requires sub-work areas

How do we re-think writing the SOC?

Roadmap to Project Success:

- Show, don't tell
- "Work Areas" rather than "Phasing“
- Emphasize constructability
- If it isn't directly related to sediment control, DO NOT INCLUDE IT!
- Use **Active** voice (not passive)

Benefits:

- Shorter construction duration
- Fewer field modifications
- More ability for contractor to work efficiently

What "Basic Steps" are the bare minimum?

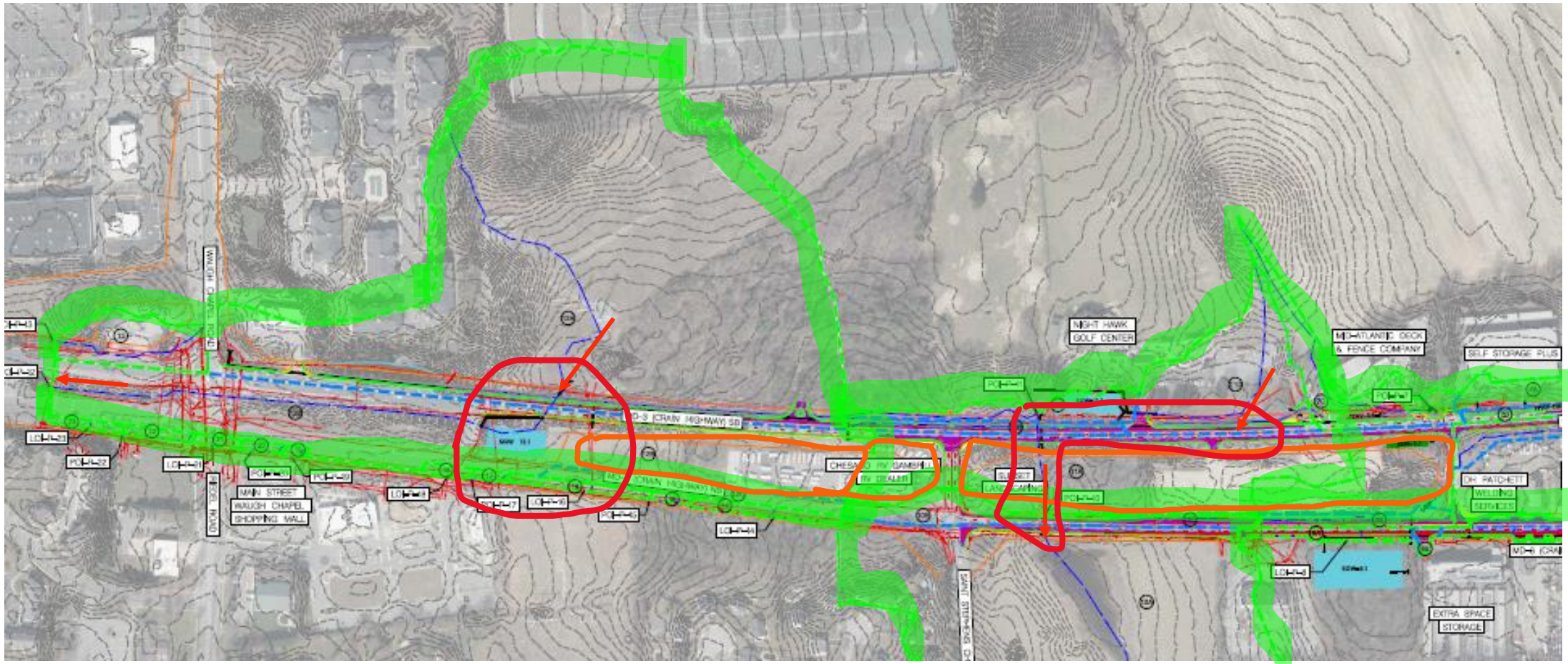
- QAD notification per Erosion and Sediment Control General Notes Sheet, Note 2
- Stakeout LOD and Clear/Grub for installation of perimeter controls before earth disturbance occurs
- Perform work as communicated in contract documents: give allowance for work to occur in any order/concurrently, with ESC in place whenever possible
- Stabilization of DA/cleaning of upstream storm pipes prior to BMP installation, with QAD approval
- Final stabilization of site when removing ESC devices with QAD approval. Stabilize any areas disturbed by removal of sediment controls.

What is the **purpose** of a sequence of construction?

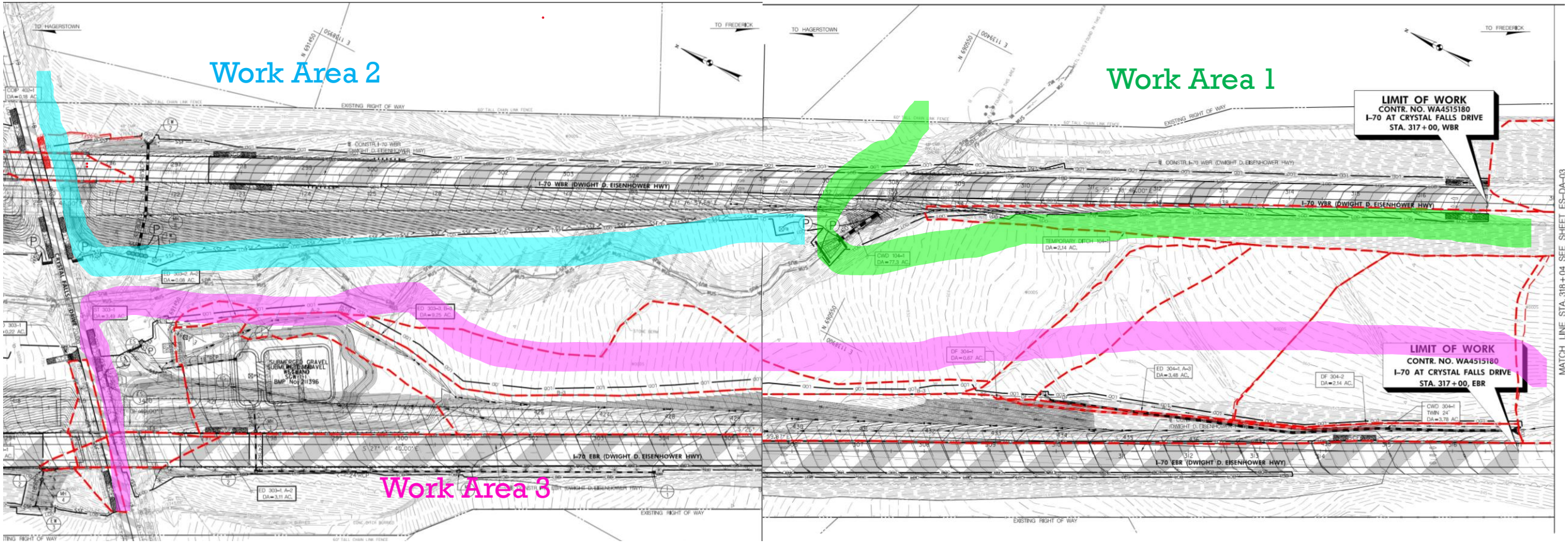
To ensure sediment controls are in place before earth is disturbed

NOT to dictate

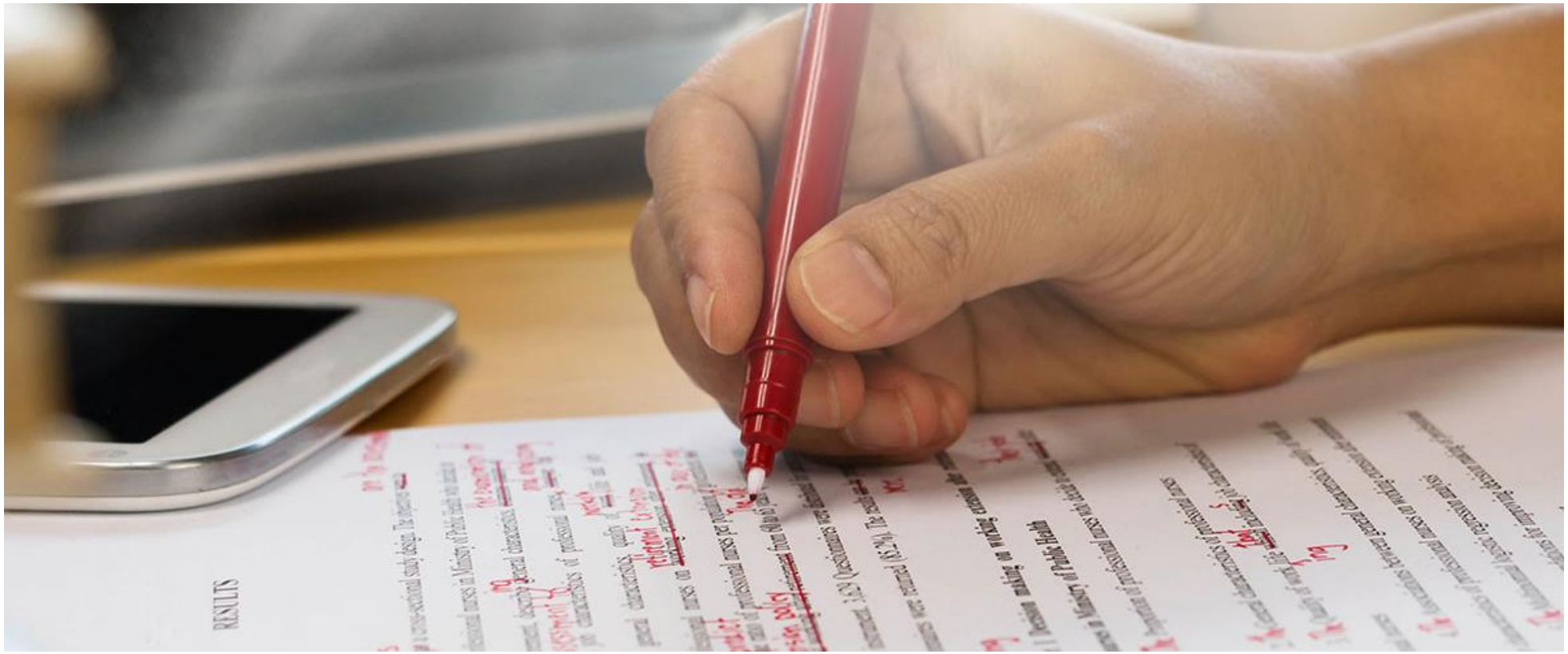
Means and Methods



1. Where does water enter and leave the construction area?
2. What are the drainage areas?
3. Are there "offsite areas" that divide the construction?
4. What are logical work areas? Do certain activities need to happen to manage the water?



Work Areas: How do we select them?



EXAMPLES: How can we provide flexibility?

Do the Work

This Step incudes the following for EACH work area:

1. Install Stabilized Construct Entrance if Required
2. Install perimeter Sediment and Erosion Controls
3. Perform Work in Work Area
4. Stabilize all disturbed areas
5. Install SWM practices (if required)
6. Final Stabilization
7. With QAD Permission, remove perimeter controls for the work area

Items that Should be Considered

- Any activity that changes drainage patterns
- Relocation or location of stock piles and staging areas
- Relocation or location of new stabilized construction entrances
- Installation of ESD practices and protection of these practices
- Sediment basin construction, removal, conversion
- Sheet flow to silt fence that changes to concentrated flow
- Stream and clear water diversions
- Dewatering
- Temporary blockages of stormwater conveyance (pipes, inlets, channels)
- Transitioning from overland flow to storm drain system control
- Flushing the storm drain system into ESC prior to final SWM;
- Zones of perimeter controls when there are shifts in drainage areas, or overlaps in limits of disturbance (LOD) or drainage areas.

BREAK

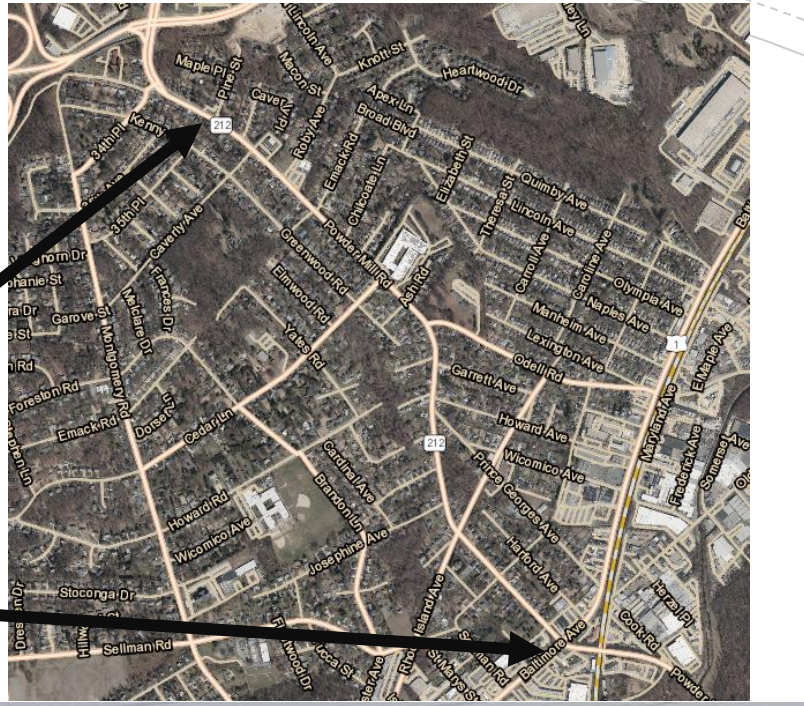
PG1065184

Powder Mill Road in Beltsville, MD

1.35-mile urban reconstruction project

Improvements included:

- Curb/gutter
- Storm drain
- ADA sidewalks
- Concurrent utility relocations

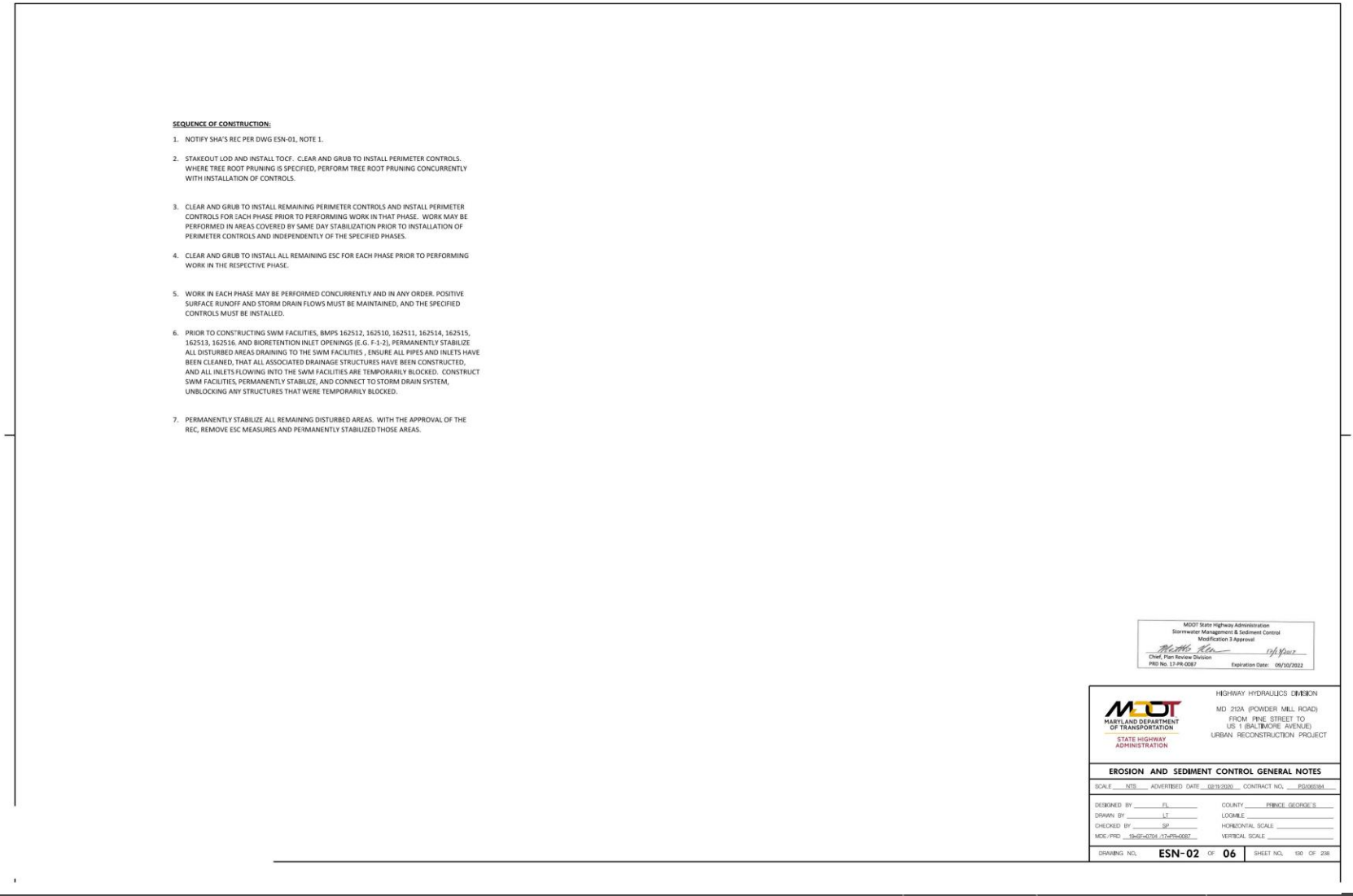


PG1065184 SOC Mindset Change

Prescriptive SOC: Required contractor to construct project in a very specific order.

Flexible SOC: Focused **SOC** on **ESC restrictions and procedures needed to maintain ESC compliance.**

Consider where concurrent work can be allowed



SEQUENCE OF CONSTRUCTION:

1. NOTIFY SHA'S REC PER DWG ESN-01, NOTE 1.
2. STAKEOUT LOD AND INSTALL TOCF. CLEAR AND GRUB TO INSTALL PERIMETER CONTROLS. WHERE TREE ROOT PRUNING IS SPECIFIED, PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS.
3. CLEAR AND GRUB TO INSTALL REMAINING PERIMETER CONTROLS AND INSTALL PERIMETER CONTROLS FOR EACH PHASE PRIOR TO PERFORMING WORK IN THAT PHASE. WORK MAY BE PERFORMED IN AREAS COVERED BY SAME DAY STABILIZATION PRIOR TO INSTALLATION OF PERIMETER CONTROLS AND INDEPENDENTLY OF THE SPECIFIED PHASES.
4. CLEAR AND GRUB TO INSTALL ALL REMAINING ESC FOR EACH PHASE PRIOR TO PERFORMING WORK IN THE RESPECTIVE PHASE.
5. WORK IN EACH PHASE MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIED CONTROLS MUST BE INSTALLED.
6. PRIOR TO CONSTRUCTING SWM FACILITIES, BMPS 162512, 162510, 162511, 162514, 162515, 162513, 162516, AND BIORETENTION INLET OPENINGS (E.G. F-1-2), PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO THE SWM FACILITIES , ENSURE ALL PIPES AND INLETS HAVE BEEN CLEANED, THAT ALL ASSOCIATED DRAINAGE STRUCTURES HAVE BEEN CONSTRUCTED, AND ALL INLETS FLOWING INTO THE SWM FACILITIES ARE TEMPORARILY BLOCKED. CONSTRUCT SWM FACILITIES, PERMANENTLY STABILIZE, AND CONNECT TO STORM DRAIN SYSTEM, UNBLOCKING ANY STRUCTURES THAT WERE TEMPORARILY BLOCKED.
7. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF THE REC, REMOVE ESC MEASURES AND PERMANENTLY STABILIZED THOSE AREAS.

MDOT State Highway Administration
Stormwater Management & Sediment Control
Modification 3 Approval
Chief, Plan Review Division
PRD No. 17-PR-0087 Expiration Date: 09/10/2022

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

HIGHWAY HYDRAULICS DIVISION
MD 212A (POWDER MILL ROAD)
FROM PINE STREET TO
US 1 (BALTIMORE AVENUE)
URBAN RECONSTRUCTION PROJECT

EROSION AND SEDIMENT CONTROL GENERAL NOTES

SCALE NTS ADVERTISED DATE 02/15/2020 CONTRACT NO. PG1065184
DESIGNED BY FL COUNTY PRINCE GEORGE'S
DRAWN BY LT LOCALE
CHECKED BY SP HORIZONTAL SCALE
MDE/PRD 19-SF-0704 /17-PR-0087 VERTICAL SCALE
DRAWING NO. ESN-02 OF 06 SHEET NO. 130 OF 238

Get from here…… to here!

Original Sequence

EROSION AND SEDIMENT CONTROL – GENERAL NOTES

GENERAL SEQUENCE OF CONSTRUCTION

SEQUENCE OF CONSTRUCTION

NOTIFY WATER MANAGEMENT ADMINISTRATION AT 410-537-3510 AT LEAST (7) DAYS PRIOR TO COMMENCING WORK. VERBAL NOTIFICATION IS TO BE FOLLOWED BY WRITTEN NOTICE WITHIN SEVEN (7) DAYS. ARRANGE FOR A PRE-CONSTRUCTION MEETING ON SITE.

SITE ACCESS AND STABILIZED CONSTRUCTION ENTRANCE LOCATIONS WILL BE DETERMINED DURING THE PRE-CONSTRUCTION MEETING AND WITH THE APPROVAL OF THE MDE COMPLIANCE INSPECTOR.

COORDINATE EROSION AND SEDIMENT CONTROL WITH MAINTENANCE OF TRAFFIC PHASES.

NOTES:

1. ITEMS WITHIN EACH PHASE MAY BE CONSTRUCTED CONCURRENTLY AS LONG AS EACH SECTION DISTURBED HAS THE APPROPRIATE INSTALLED E&S CONTROLS.

PHASE I

1. CONTRACTOR SHALL STAKEOUT LOD AND INSTALL ORANGE CONSTRUCTION FENCE (OCF) WHERE NOTED.
2. CLEAR AND GRUB FOR PLACING PERIMETER E&S CONTROLS. INSTALL ALL DIVERSION FENCE (DF), SILT FENCE (SF), RIPRAP OUTFALL PROTECTION (ROP), AND TEMPORARY ASPHALT BERMS (TAB), AND TEMPORARY PIPE DIVERSIONS AS SHOWN ON THE PLANS, DRAWING NO. ES1-01 THRU ES1-16. INSTALL INLET PROTECTION AT EXISTING INLETS AS SHOWN ON THE PLANS. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
3. (ES1-01) INSTALL PIPE AS SHOWN FROM STA 104+50 RT TO 108+70 RT, MH-1/1, AND INLETS I-3/1, I-7/1, I-11/1 AND I-12/1 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
4. (ES1-02) INSTALL PIPE AS SHOWN FROM STA 111+35 RT TO 114+00 RT, INLETS I-5/2 AND I-6/2, PROVIDE PIPE STUB OUT FROM I-5/2 AND TEMPORARY BULKHEAD. TEMPORARILY BLOCK ALL INLETS UNTIL PHASE II CONSTRUCTION OF DRAINAGE ENHANCEMENTS ARE COMPLETE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. (ES1-03) INSTALL INLET I-4/3, I-6/3, I-7/3, 18" RCP AND INSTALL COIP. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. (ES1-04) INSTALL MH-1/4, INLET I-2/4, I-6/4, 18" RCP AT STA 122+60 RT AND INSTALL COIP. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
5. (ES1-06 TO ES1-07) INSTALL PIPE AS SHOWN FROM STA 126+10 RT TO 133+50 RT, FIL-1/7, MH-1/6, AND INLETS I-3/5, I-8/5, I-13/5, I-1/6, I-2/6, I-3/6, I-4/6 AND I-1/7, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
6. (ES1-07 TO ES1-08) INSTALL PIPE AS SHOWN FROM STA 135+60 RT TO 138+25 RT, INLETS I-2/7, I-3/7 AND I-1/8, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
7. (ES1-08 TO ES1-09) INSTALL PIPE AS SHOWN FROM STA 138+10 RT TO 148+00 RT, FIL-1/8, FIL-1/9 AND INLETS I-3/8, I-4/8, I-7/8 AND I-1/9, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. TEMPORARILY BLOCK ALL INLETS UNTIL PHASE II CONSTRUCTION OF DRAINAGE ENHANCEMENTS ARE COMPLETE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
8. (ES1-10 TO ES1-11) INSTALL PIPE AS SHOWN FROM STA 146+00 RT TO 151+25 RT, MH-1/10, INLETS I-1/10, I-2/10, I-4/10, I-5/10, I-6/10, I-1/11, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN AND TEMPORARILY BLOCK I-4/10, I-5/10 AND I-6/10. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. (ES1-11) INSTALL INLETS I-7/11, I-2/11, I-5/11, I-6/11 AND I-9/11. . BLOCK ALL INLETS UNTIL PHASE II CONSTRUCTION OF DRAINAGE ENHANCEMENTS ARE COMPLETE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
9. (ES1-12 TO ES1-13) INSTALL PIPES AS SHOWN FROM STA 157+75 RT TO 160+75 RT. INLETS I-2/12, I-3/12, I-4/12, I-2/13, JUNCTION BOX JB-1/12 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
10. (ES1-13 TO ES1-15) INSTALL PIPE AS SHOWN FROM STA 164+90 RT TO 174+06 RT, MH-1/13, MH1/15, INLETS I-5/13, I-2/14, I-3/14, I-1/15, I-3/15, I-4/15, I-6/15 AND JUNCTION BOX JB-1/15, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
11. (ES1-16) INSTALL INLET PROTECTION AT EXISTING INLET AS SHOWN ON PLANS. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AND ADA CURB RAMP AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT DEVICE.
12. ONCE CONSTRUCTION IS COMPLETE ALONG THE SOUTHWEST SIDE OF THE PROJECT AND ALL AREAS ARE STABILIZED, AND WITH THE APPROVAL OF THE WMA INSPECTOR, REMOVE CONTROLS ALONG THIS SIDE OF THE ROADWAY AND STABILIZE ANY REMAINING AREAS.

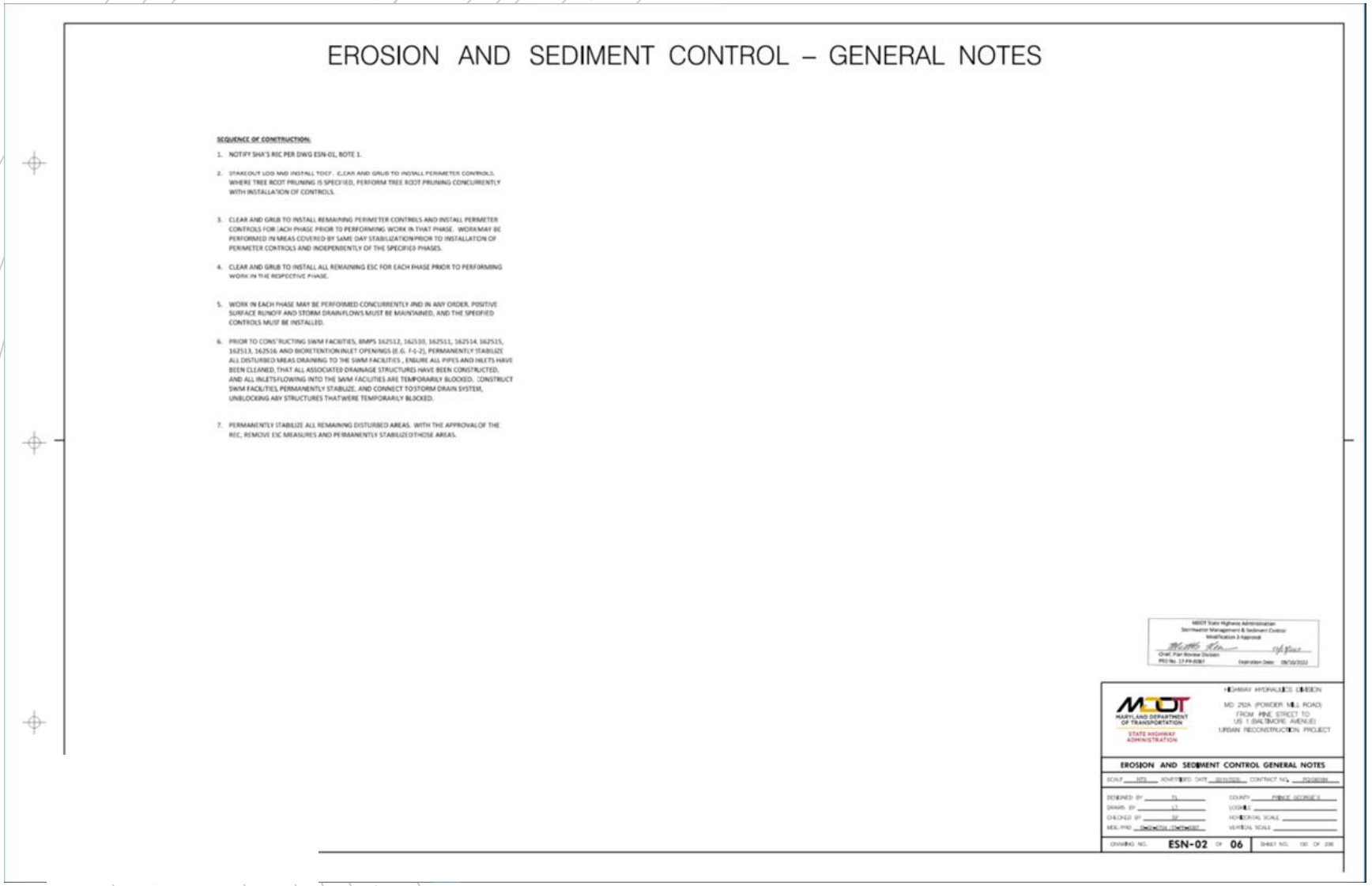
PHASE II

1. CONTRACTOR TO STAKEOUT LOD AND INSTALL ORANGE CONSTRUCTION FENCE (OCF) WHERE NOTED.
2. CLEAR AND GRUB FOR PLACING PERIMETER E&S CONTROLS. INSTALL DIVERSION FENCE (DF), SILT FENCE (SF), RIPRAP OUTFALL PROTECTION (ROP), AND TEMPORARY ASPHALT BERMS (TAB) AS SHOWN ON THE PLANS, DRAWING NO. ES2-01 THRU ES2-16. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
3. (ES2-01 TO ES2-02) INSTALL 15" RCP AND 18" RCP AS SHOWN ON PLANS AND INLETS I-1/1, I-6/1, I-13/1, I-14/1, I-9/1, I-10/1, I-1/2, I-2/2, I-3/2 AND I-4/2, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AND AT INLETS AS SHOWN. TEMPORARILY BLOCK INLETS I-2/1, I-4/1, I-5/1, I-8/1, I-10/1, I-1/2, I-2/2 AND I-3/2. UNBLOCK INLETS THAT WERE INSTALLED DURING PHASE I OF CONSTRUCTION THAT TIE-IN TO THE DRAINAGE ENHANCEMENTS INSTALLED IN THIS PHASE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. AFTER SURROUNDING AREA DRAINING TO THE BIOSWALE'S IS STABILIZED, CONSTRUCT BIOSWALE'S 1, 2, 3 AND 4 WHILE MAINTAINING POSITIVE DRAINAGE TO NEARBY INLETS DURING GRADING ACTIVITIES. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
4. (ES2-02 TO ES2-04) INSTALL PIPE AS SHOWN FROM STA 112+00 LT TO 119+50 LT, MH-1/2, MH-1/3, MH-2/3, INLETS I-7/2, I-8/2, I-1/3, I-2/3, I-3/3, I-5/3, I-1/4 AND I-3/4, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. UNBLOCK INLETS THAT WERE INSTALLED DURING PHASE I OF CONSTRUCTION THAT TIE-IN TO THE DRAINAGE ENHANCEMENTS INSTALLED IN THIS PHASE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
5. (ES2-04 TO ES2-05) INSTALL PIPE AS SHOWN FROM STA 121+00 LT TO 127+50 LT, FIL-1/4, FIL-1/5, FIL-2/5, INLETS I-4/4, I-5/4, I-1/5, I-2/5, I-4/5, I-5/5, I-6/5, I-7/5, I-9/5, I-10/5, I-11/5, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. UNBLOCK INLETS THAT WERE INSTALLED DURING PHASE I OF CONSTRUCTION THAT TIE-IN TO THE DRAINAGE ENHANCEMENTS INSTALLED IN THIS PHASE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
6. (ES2-06 TO ES2-07) INSTALL PIPE AS SHOWN FROM STA 128+00 LT TO 133+00 LT, INLETS I-12/5, I-5/6, I-6/6, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. UNBLOCK INLETS THAT WERE INSTALLED DURING PHASE I OF CONSTRUCTION THAT TIE-IN TO THE DRAINAGE ENHANCEMENTS INSTALLED IN THIS PHASE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
7. (ES2-07 TO ES2-08) INSTALL PIPE AS SHOWN FROM STA 135+50 LT TO 140+50 LT, INLETS I-4/7, I-5/7, I-3/8, I-6/8, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. UNBLOCK INLETS THAT WERE INSTALLED DURING PHASE I OF CONSTRUCTION THAT TIE-IN TO THE DRAINAGE ENHANCEMENTS INSTALLED IN THIS PHASE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
8. (ES2-09 TO ES2-10) INSTALL PIPE AS SHOWN FROM STA 142+50 LT TO 152+50 LT, MH-1/8, MH-2/8, MH-3/9 AND INLETS I-2/9, I-3/9, I-4/9, I-5/9, I-6/9 I-9/10, I-1/11, I-4/11 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. UNBLOCK INLETS THAT WERE INSTALLED DURING PHASE I OF CONSTRUCTION THAT TIE-IN TO THE DRAINAGE ENHANCEMENTS INSTALLED IN THIS PHASE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
9. (ES2-11 TO ES2-13) INSTALL TEMPORARY STONE OUTLET STRUCTURE (TSOS-1) AT STA 158+75 LT. INSTALL PIPE AS SHOWN FROM STA 151+75 LT TO 161+00 LT, EW-1/11, ES-1/12, MH-1/12, INLETS I-3/11, I-4/11, I-7/11, I-8/11, I-1/12, I-5/12, I-1/13 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. UNBLOCK INLETS THAT WERE INSTALLED DURING PHASE I OF CONSTRUCTION THAT TIE-IN TO THE DRAINAGE ENHANCEMENTS INSTALLED IN THIS PHASE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
10. (ES2-13 TO ES2-15) INSTALL PIPE AS SHOWN FROM STA 165+50 LT TO 174+06 LT, MH-2/15, INLETS I-4/13, I-3/13, I-1/14, I-4/14, I-2/15 AND I-5/15, CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. UNBLOCK INLETS THAT WERE INSTALLED DURING PHASE I OF CONSTRUCTION THAT TIE-IN TO THE DRAINAGE ENHANCEMENTS INSTALLED IN THIS PHASE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.
11. ONCE ALL AREAS ARE STABILIZED, AND WITH THE APPROVAL OF THE WMA INSPECTOR, REMOVE THE EROSION AND SEDIMENT CONTROLS AND STABILIZE ANY REMAINING AREAS.

3. (ES1-01) INSTALL PIPE AS SHOWN FROM STA 104+50 RT TO 108+70 RT, MH-1/1, AND INLETS I-3/1, I-7/1, I-11/1 AND I-12/1 CONSTRUCTING FROM DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AT INLETS AS SHOWN. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.

4. (ES1-02) INSTALL PIPE AS SHOWN FROM STA 111+35 RT TO 114+00 RT, INLETS I-5/2 AND I-6/2, PROVIDE PIPE STUB OUT FROM I-5/2 AND TEMPORARILY BULKHEAD. TEMPORARILY BLOCK ALL INLETS UNTIL PHASE II CONSTRUCTION OF DRAINAGE ENHANCEMENTS ARE COMPLETE. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. (ES1-03) INSTALL INLET I-4/3, I-6/3, I-7/3, 18" RCP AND INSTALL COIP. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. (ES1-04) INSTALL MH-1/4, INLET I-2/4, I-6/4, 18" RCP AT STA 122+60 RT AND INSTALL COIP. CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEDIMENT CONTROL DEVICE.

Detailed Analysis Point 3-4 and Effects



EROSION AND SEDIMENT CONTROL – GENERAL NOTES

SEQUENCE OF CONSTRUCTION:

1. NOTIFY SHA'S RIC PER DWG ESN-01, BOTE 1.
2. STAKEOUT LOD AND INSTALL TOCF. CLEAR AND GRUB TO INSTALL PERIMETER CONTROLS. WHERE TREE ROOT PRUNING IS SPECIFIED, PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS.
3. CLEAR AND GRUB TO INSTALL REMAINING PERIMETER CONTROLS AND INSTALL PERIMETER CONTROLS FOR EACH PHASE PRIOR TO PERFORMING WORK IN THAT PHASE. WORK MAY BE PERFORMED IN AREAS COVERED BY SAME DAY STABILIZATION PRIOR TO INSTALLATION OF PERIMETER CONTROLS AND INDEPENDENTLY OF THE SPECIFIED PHASES.
4. CLEAR AND GRUB TO INSTALL ALL REMAINING ESC FOR EACH PHASE PRIOR TO PERFORMING WORK IN THE RESPECTIVE PHASE.
5. WORK IN EACH PHASE MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIED CONTROLS MUST BE INSTALLED.
6. PRIOR TO CONSTRUCTING SWM FACILITIES, BMPS 162512, 162510, 162511, 162514 162515, 162513, 162516 AND BIORETENTION INLET OPENINGS (E.G. F1-2), PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO THE SWM FACILITIES , ENSURE ALL PIPES AND INLETS HAVE BEEN CLEANED, THAT ALL ASSOCIATED DRAINAGE STRUCTURES HAVE BEEN CONSTRUCTED, AND ALL INLETS FLOWING INTO THE SWM FACILITIES ARE TEMPORARILY BLOCKED. CONSTRUCT SWM FACILITIES, PERMANENTLY STABILIZE, AND CONNECT TO STORM DRAIN SYSTEM, UNBLOCKING ABY STRUCTURES THAT WERE TEMPORARILY BLOCKED.
7. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF THE RIC, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

HIGHWAY HYDRAULICS DIVISION

MD 212A (POWDER MILL ROAD)
FROM PINE STREET TO
US 1 (BALTIMORE AVENUE)
URBAN RECONSTRUCTION PROJECT

EROSION AND SEDIMENT CONTROL GENERAL NOTES

DESIGNED BY FL
DRAWN BY LJ
CHECKED BY BF

DRAWING NO. ESN-02 OF 06

Flexible Sequence after Edits

FLEXIBLE SEQUENCE

SEQUENCE OF CONSTRUCTION

1. NOTIFY QAD PER ESN–01 NOTE 2.

2. STAKE OUT LOD AND INSTALL TOCF PER QAD APPROVAL.

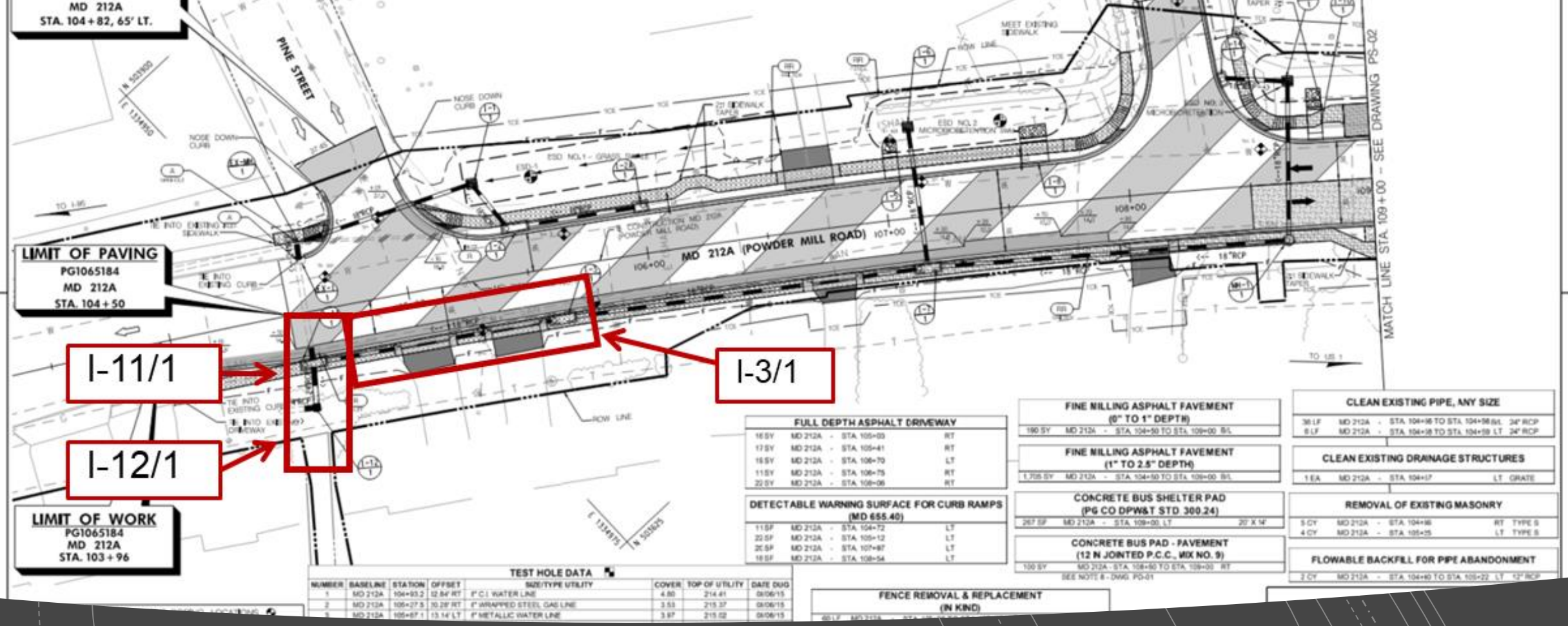
3. CLEAR AND GRUB TO INSTALL PERIMETER ESC CONTROLS. INSTALL PERIMETER CONTROLS FOR EACH WORK AREA PRIOR TO PERFORMING WORK IN THAT AREA. WORK MAY BE PERFORMED IN AREAS COVERED BY SAME DAY STABILIZATION PRIOR TO THE INSTALLATION OF PERIMETER CONTROLS AND INDEPENDENT OF THE SPECIFIED PHASES. WHERE TREE ROOT PRUNING IS SPECIFIED, PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS.

4. CLEAR AND GRUB TO INSTALL ALL REMAINING ESC FOR EACH WORK AREA PRIOR TO PERFORMING WORK IN THE RESPECTIVE WORK AREA.

5. WORK IN EACH WORK AREA MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIED CONTROLS MUST BE INSTALLED.

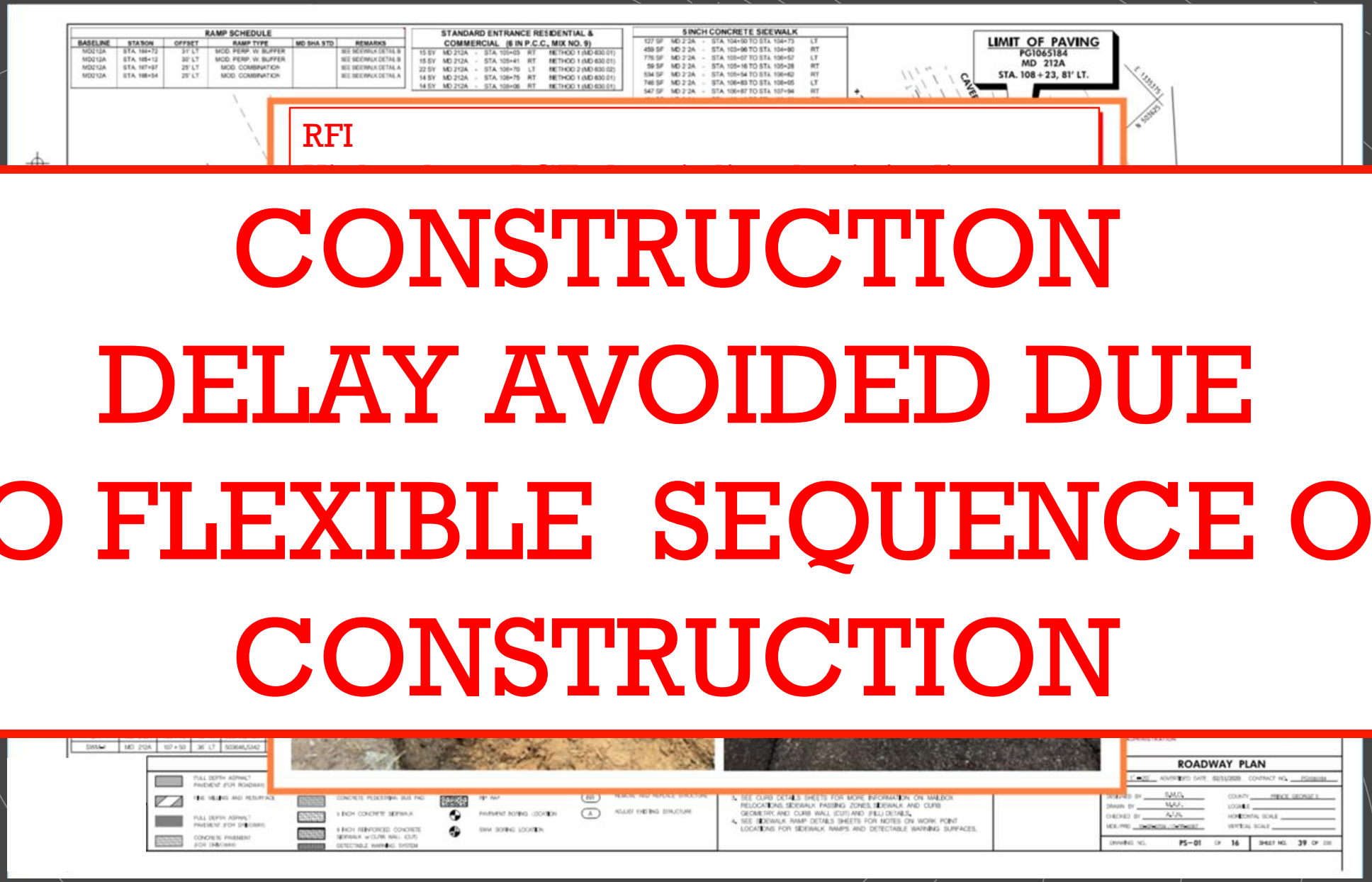
6. PRIOR TO CONSTRUCTION SWM FACILITIES, BMPS 162512, 162510, 162511, 162514, 162515, 162513, 162516, AND BIORETENTION INLET FILTER OPENINGS (E.G. F–1–2), PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO THE SWM FACILITIES, ENSURE ALL PIPES AND INLETS HAVE BEEN CLEANED, THAT ALL ASSOCIATED DRAINAGE STRUCTURES HAVE BEEN CONSTRUCTED, AND ALL INLETS FLOWING INTO THE SWM FACILITIES ARE TEMPORARILY BLOCKED. CONSTRUCT SWM FACILITIES, PERMANENTLY STABILIZE, AND CONNECT TO THE STORM DRAIN SYSTEM, UNBLOCKING ANY STRUCTURES THAT WERE TEMPORARILY BLOCKED.

7. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.



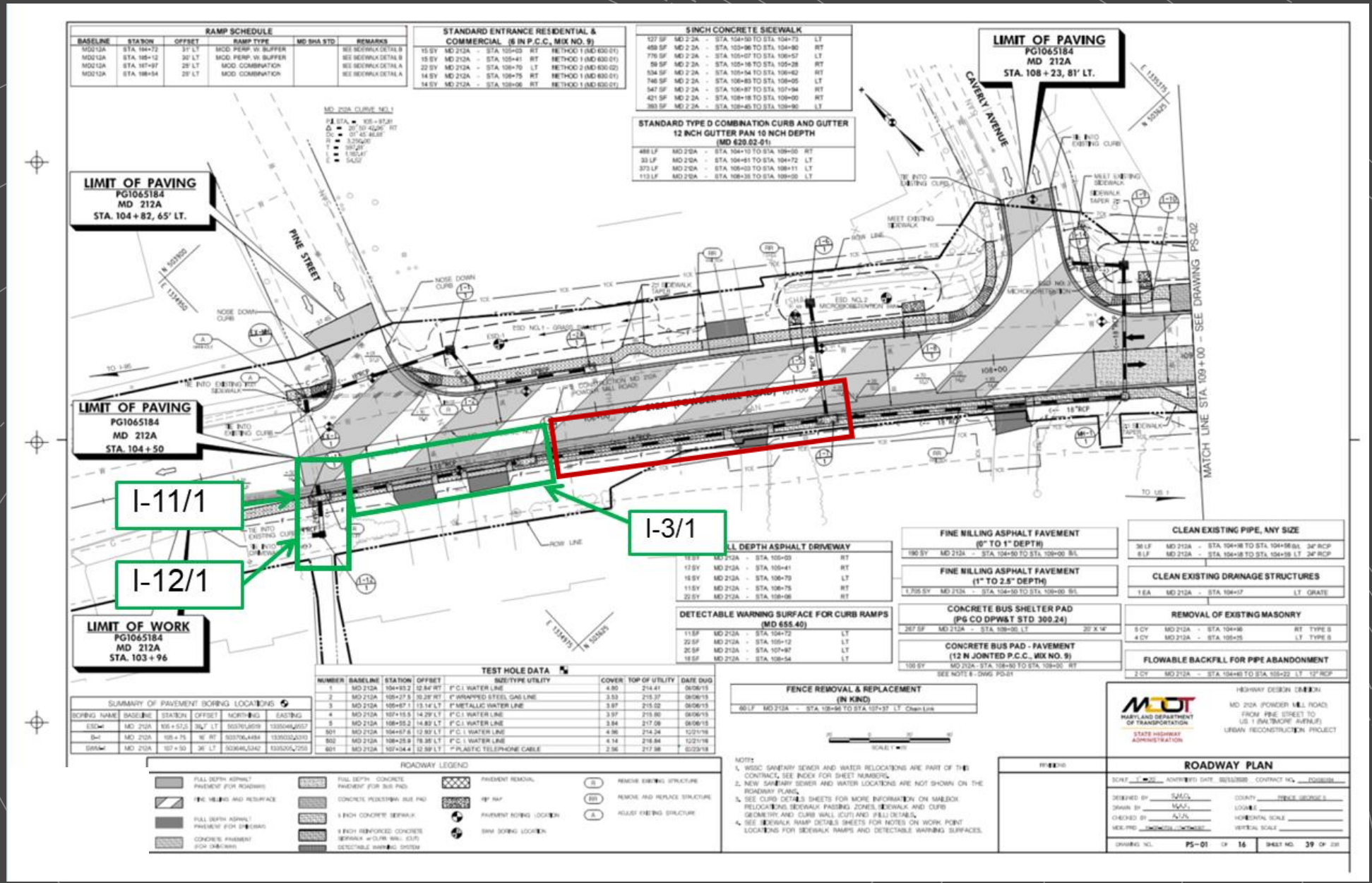
Installation of Pipe and Structure → Pipe Run from I-12/1 to I-11/1 (Start of Work ES1-1)

First Conflict BG&E Electrical Cable

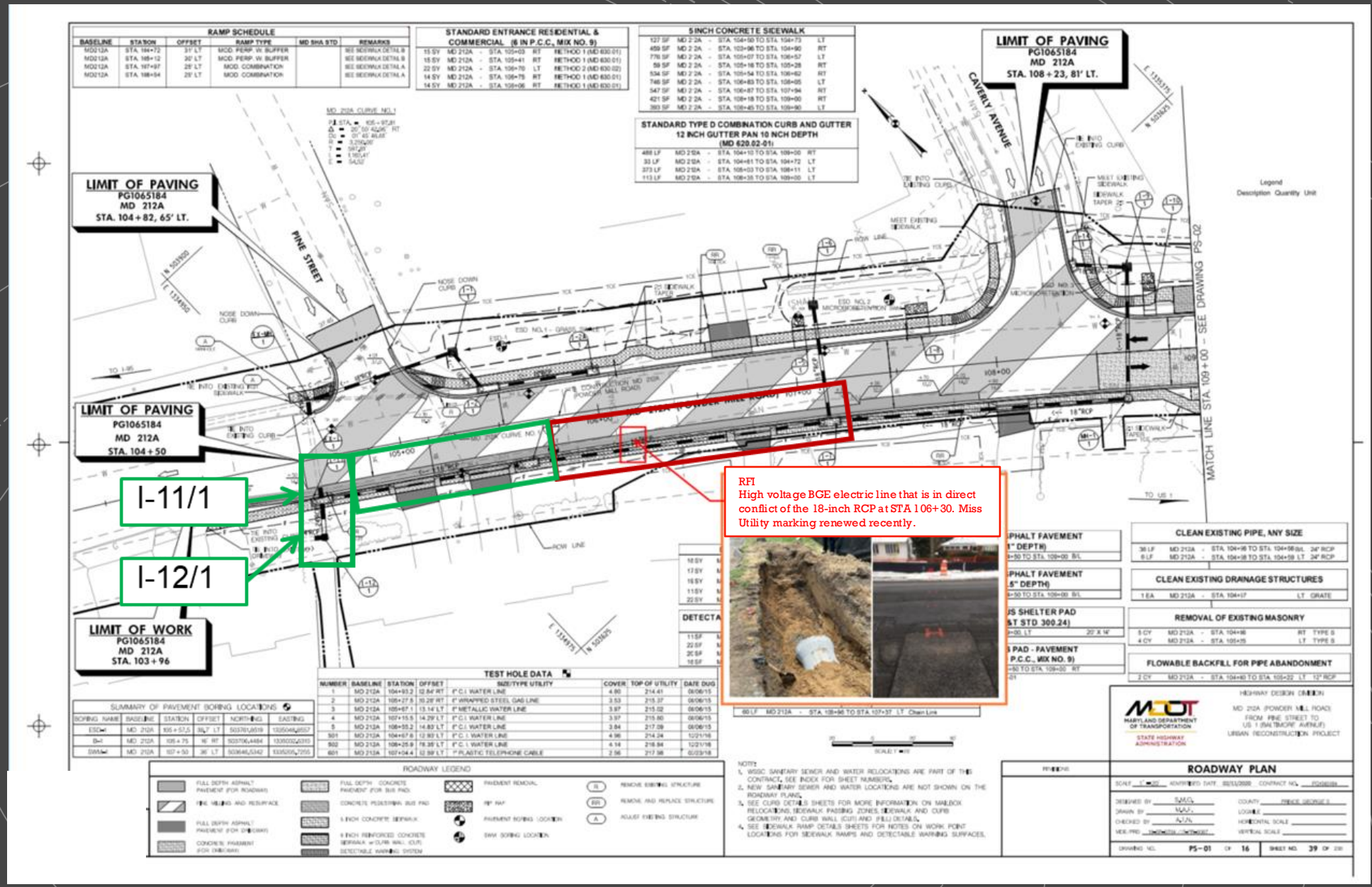


CONSTRUCTION DELAY AVOIDED DUE TO FLEXIBLE SEQUENCE OF CONSTRUCTION

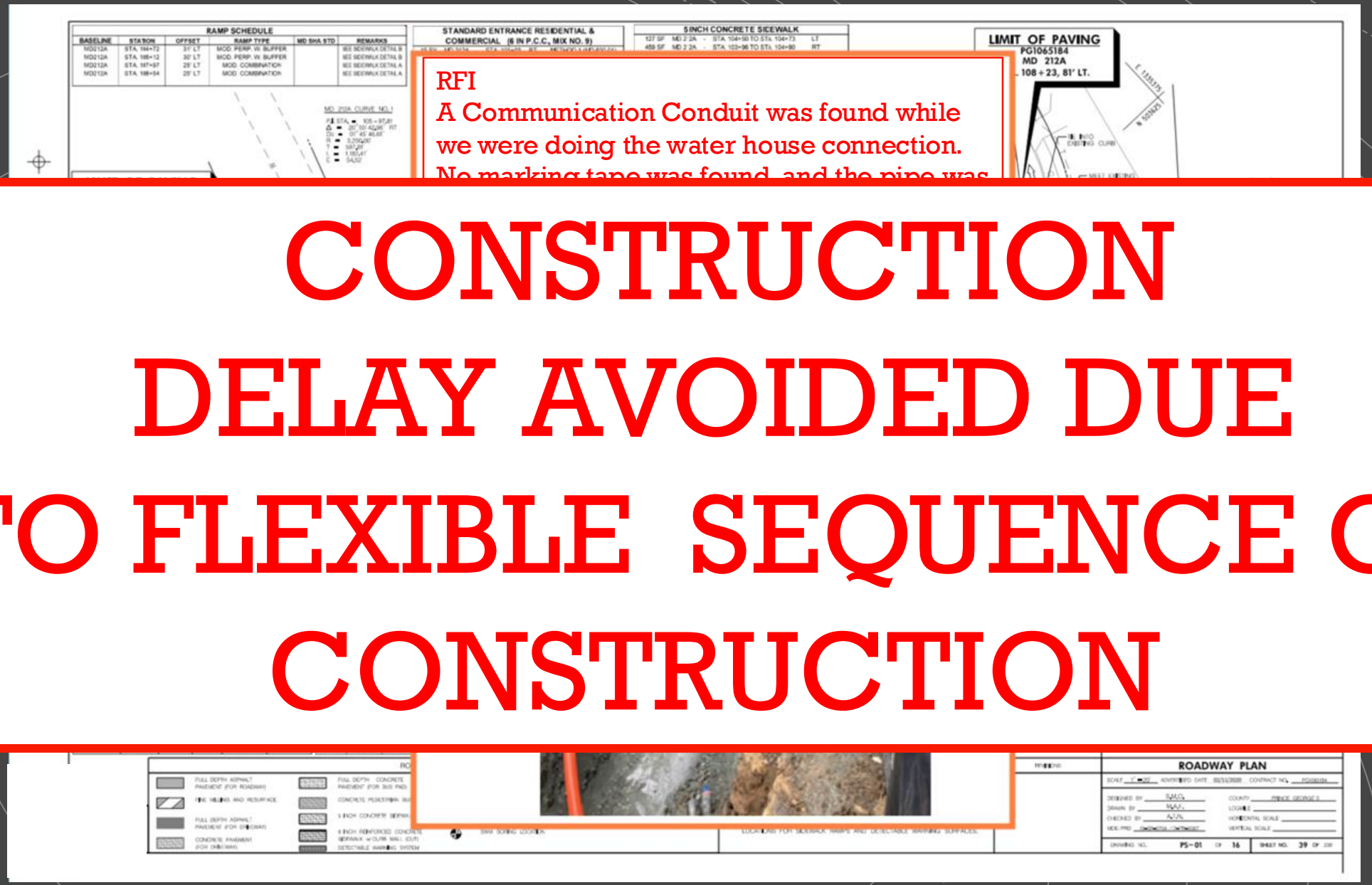
Second Conflict →
BG&E Electrical Cable



Installation of Pipe and Structure → Pipe Run from I-3/1 to I-7/1

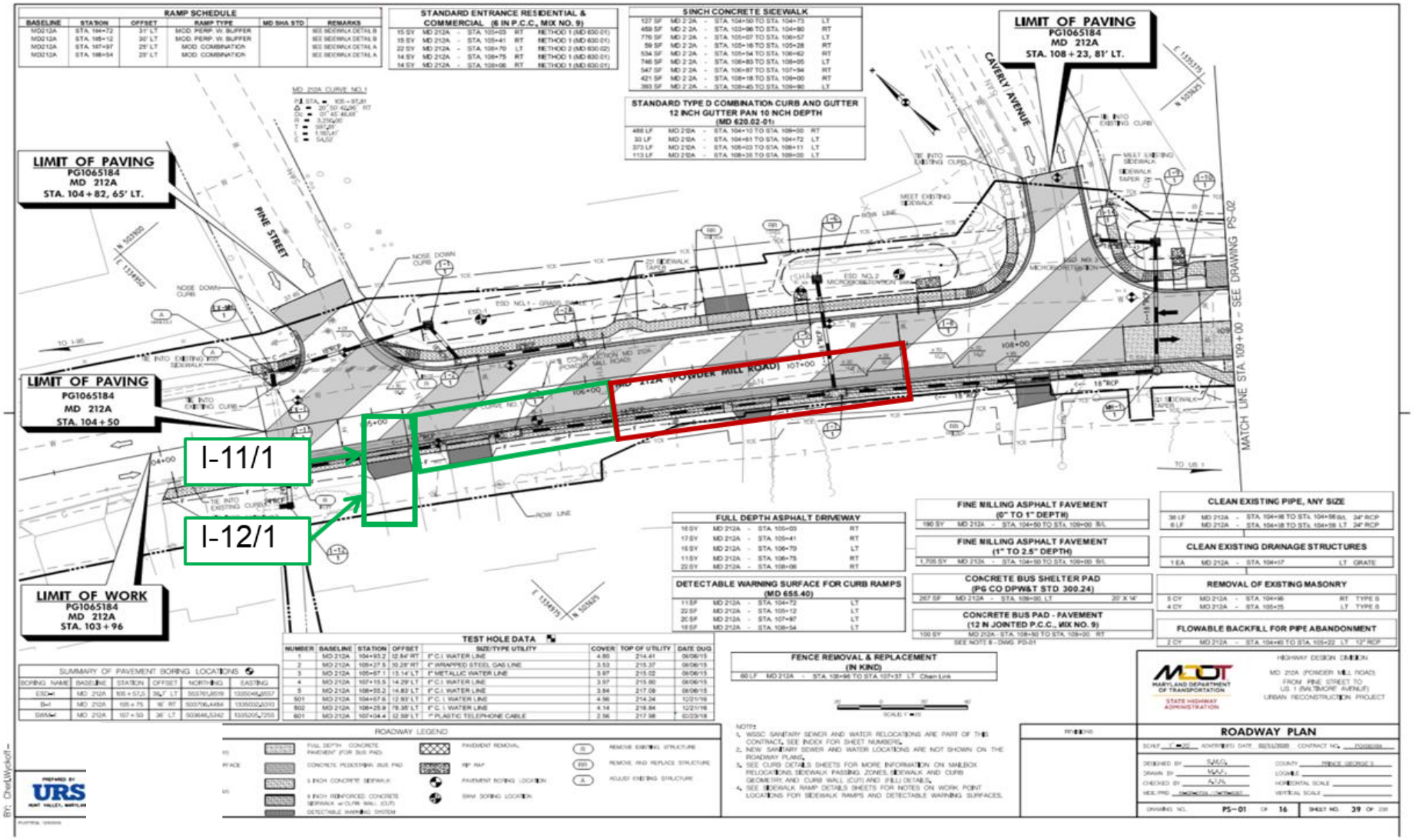


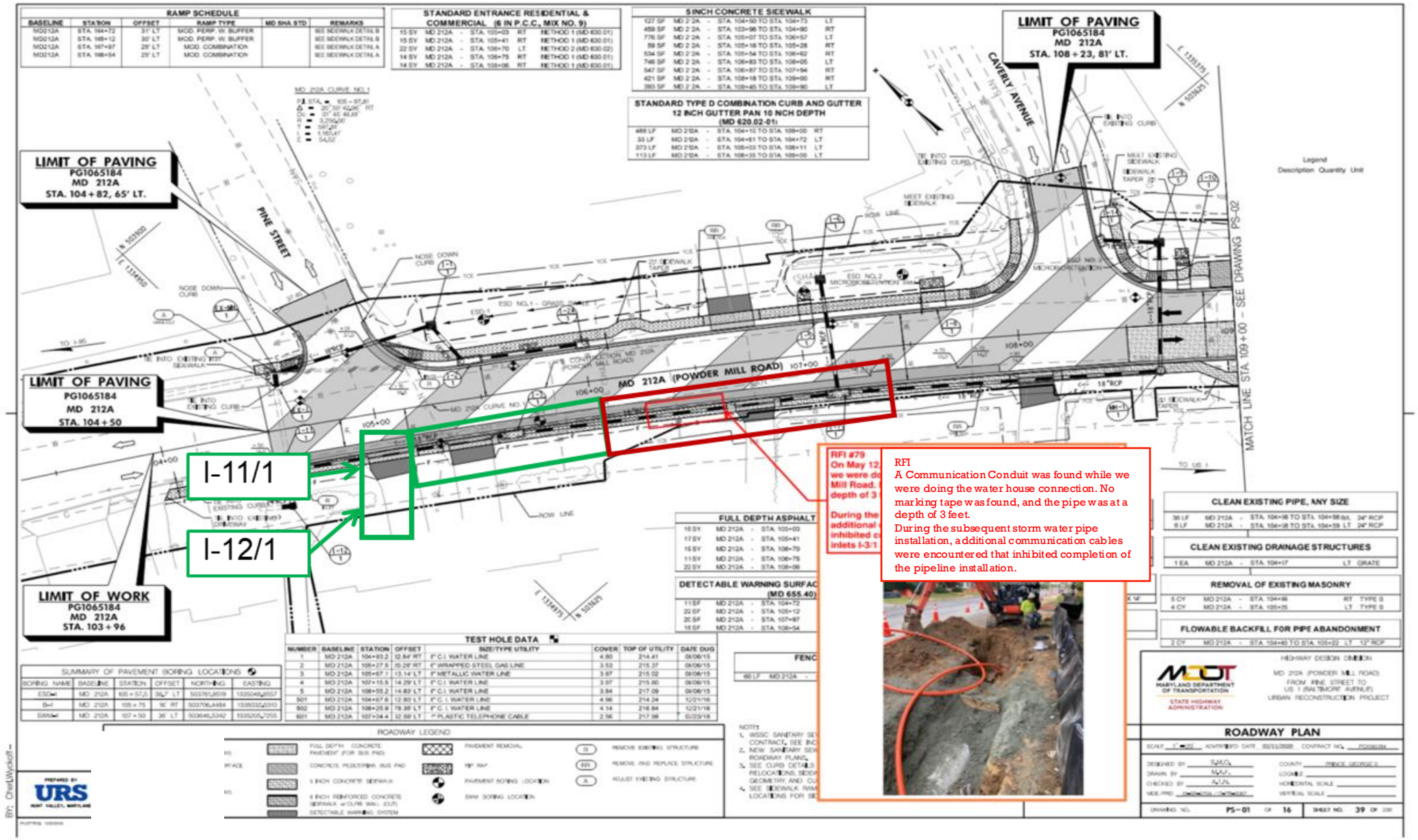
Second Conflict →
BG&E Electrical Cable

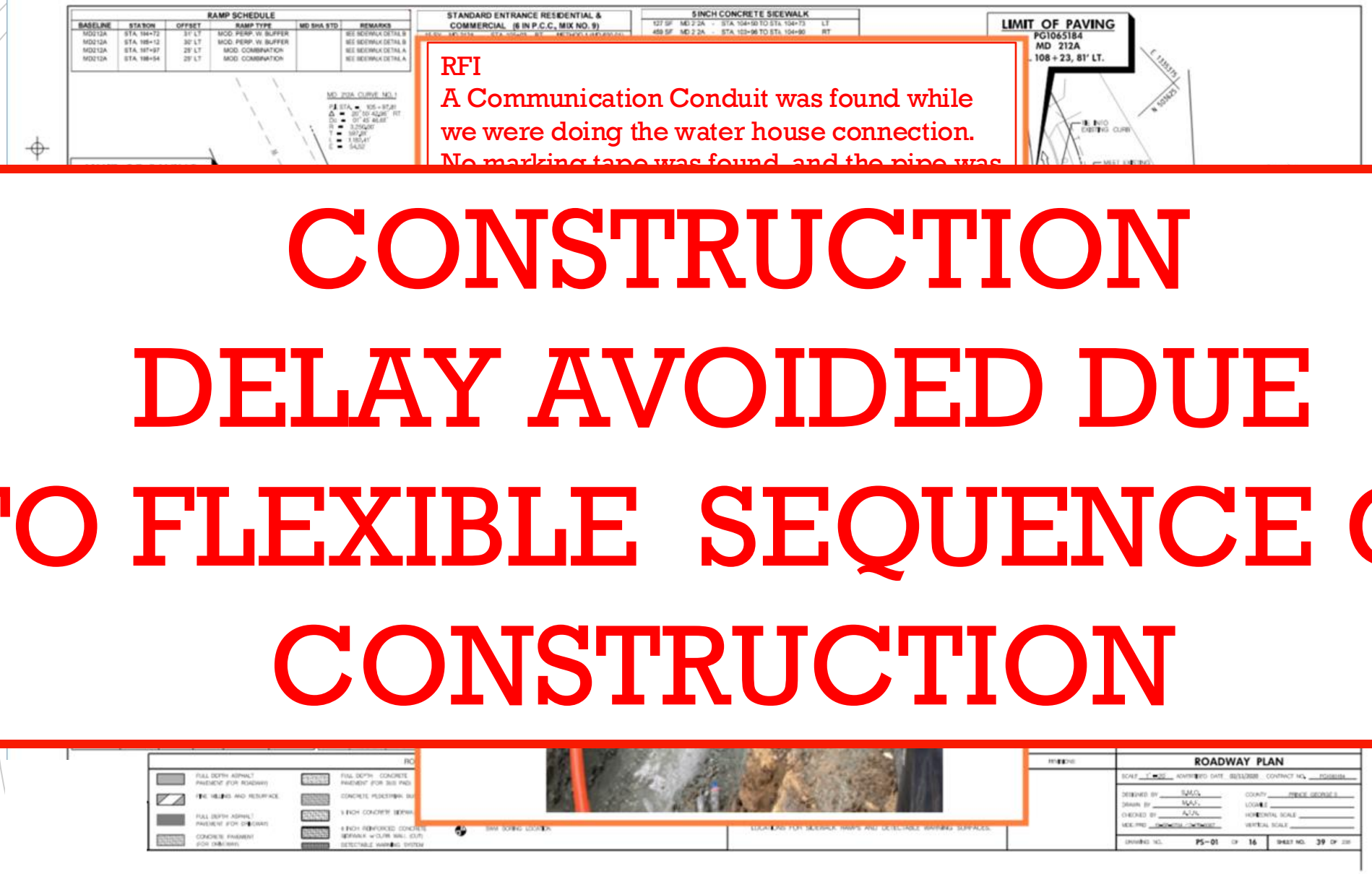


CONSTRUCTION DELAY AVOIDED DUE TO FLEXIBLE SEQUENCE OF CONSTRUCTION

Third Conflict →
Communication Cable


LIMIT OF PAVING
PG1065184
MD 212A
STA. 104+82, 65' LT.
LIMIT OF PAVING
PG1065184
MD 212A
STA. 104+50
LIMIT OF WORK
PG1065184
MD 212A
STA. 103+96
LIMIT OF PAVING
PG1065184
MD 212A
STA. 108+23, 81' LT.
I-11/1
I-12/1
PINE STREET
CAVERLY AVENUE
MD 212A (POWDER MILL ROAD)
MATCH LINE STA 109+00 - SEE DRAWING PS-02
RAMP SCHEDULE
STANDARD ENTRANCE RESIDENTIAL & COMMERCIAL (6 IN P.C.C., MIX NO. 9)
5 INCH CONCRETE SIDEWALK
STANDARD TYPE D COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 10 INCH DEPTH (MD 620.02-01)
FULL DEPTH ASPHALT DRIVEWAY
DETECTABLE WARNING SURFACE FOR CURB RAMPS (MD 655.40)
FINE MILLING ASPHALT PAVEMENT (0" TO 1" DEPTH)
FINE MILLING ASPHALT PAVEMENT (1" TO 2.5" DEPTH)
CONCRETE BUS SHELTER PAD (PG CO DPW&T STD 300.24)
CONCRETE BUS PAD - PAVEMENT (12 IN JOINTED P.C.C., MIX NO. 9)
CLEAN EXISTING PIPE, ANY SIZE
CLEAN EXISTING DRAINAGE STRUCTURES
REMOVAL OF EXISTING MASONRY
FLOWABLE BACKFILL FOR PIPE ABANDONMENT
FENCE REMOVAL & REPLACEMENT (IN KIND)
TEST HOLE DATA
SUMMARY OF PAVEMENT BORING LOCATIONS
ROADWAY LEGEND
NOTES:
1. WSSC SANITARY SEWER AND WATER RELOCATIONS ARE PART OF THIS CONTRACT, SEE INDEX FOR SHEET NUMBERS.
2. NEW SANITARY SEWER AND WATER LOCATIONS ARE NOT SHOWN ON THE ROADWAY PLANS.
3. SEE CURB DETAILS SHEETS FOR MORE INFORMATION ON MAILBOX RELOCATIONS, SIDEWALK PASSING ZONES, SIDEWALK AND CURB GEOMETRY AND CURB WALL (CUT) AND (FILL) DETAILS.
4. SEE SIDEWALK RAMP DETAILS SHEETS FOR NOTES ON WORK POINT LOCATIONS FOR SIDEWALK RAMPS AND DETECTABLE WARNING SURFACES.
MDOT
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
HIGHWAY DESIGN DIVISION
MD 212A (POWDER MILL ROAD)
FROM PINE STREET TO US 1 (BALTIMORE AVENUE)
URBAN RECONSTRUCTION PROJECT
ROADWAY PLAN
PREPARED BY
URS
HUNT VALLEY, MARYLAND
DRAWING NO. PS-01 OF 16
SHEET NO. 39 OF 230


LIMIT OF PAVING
PG1065184
MD 212A
STA. 108 + 23, 81' LT.
LIMIT OF PAVING
PG1065184
MD 212A
STA. 104 + 82, 65' LT.
LIMIT OF PAVING
PG1065184
MD 212A
STA. 104 + 50
LIMIT OF WORK
PG1065184
MD 212A
STA. 103 + 96
I-11/1
I-12/1
MD 212A (POWDER MILL ROAD)
PINE STREET
CAVERLY AVENUE
MATCH LINE STA. 109+00 – SEE DRAWING PS-02
RFI #79
On May 12, we were do Mill Road. depth of 3
During the additional inhibited c inlets I-3/1
RFI
A Communication Conduit was found while we were doing the water house connection. No marking tape was found, and the pipe was at a depth of 3 feet.
During the subsequent storm water pipe installation, additional communication cables were encountered that inhibited completion of the pipeline installation.
RAMP SCHEDULE
STANDARD ENTRANCE RESIDENTIAL & COMMERCIAL (6 IN P.C.C., MIX NO. 9)
5 INCH CONCRETE SIDEWALK
STANDARD TYPE D COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 10 INCH DEPTH (MD 620.02-01)
FULL DEPTH ASPHALT
DETECTABLE WARNING SURFAC (MD 655.40)
CLEAN EXISTING PIPE, ANY SIZE
CLEAN EXISTING DRAINAGE STRUCTURES
REMOVAL OF EXISTING MASONRY
FLOWABLE BACKFILL FOR PIPE ABANDONMENT
TEST HOLE DATA
SUMMARY OF PAVEMENT BORING LOCATIONS
ROADWAY LEGEND
ROADWAY PLAN
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
MD 212A (POWDER MILL ROAD) FROM PINE STREET TO US 1 (BALTIMORE AVENUE) URBAN RECONSTRUCTION PROJECT
PREPARED BY URS
PS-01



CONSTRUCTION DELAY AVOIDED DUE TO FLEXIBLE SEQUENCE OF CONSTRUCTION

Special Design Considerations

Should I add more detail?

- Special existing conditions (i.e., environmental concerns)
- Project-specific conditions relating to design

In the past, any out-of-the-norm condition on your project site would lead to more detail in the sequence. Here are some reasons why that additional information might not be needed!

SIMPLIFICATION ISSUE:

- Some projects will require review for MD Code 378 or Dam Safety
- MDE currently requires more detail for MD Code 378 sequences

SIMPLIFICATION SOLUTION:

- A separate SOC for the MD Code 378/Dam Safety portion can be developed and shown on the appropriate SWM/Drainage sheet.

NOT NEEDED IN SEQUENCE!

10. TIER II WATERSHEDS

FOR DISCHARGES WITHIN A DRAINAGE AREA TO, OR DIRECTLY INTO, A TRIBUTARY THAT IS DESIGNATED AS TIER II, PERFORM THE FOLLOWING.

MAXIMIZE ACCELERATED STABILIZATION TECHNIQUES.

DO NOT LOCATE STOCKPILES, DEBRIS, EQUIPMENT, OR OTHERWISE STORE MATERIALS WITHIN THE STREAM PROTECTION ZONE (SPZ).

Additional Requirements:

- Anti-degradation Checklist (Submitted to HHD for projects over 1 acre of LOD)
- Tier II Review by MDE (coordinated by EPD)
- Show Tier II boundary on the plans
- "Accelerated Stabilization" - decided on case-by-case basis

NOT NEEDED IN SEQUENCE!

24. STREAM RESTRICTION PERIODS

ALL IN-STREAM WORK IS PROHIBITED DURING STREAM CLOSURE PERIODS, WHICH PROTECT FISH AND OTHER WILDLIFE DEPENDENT ON THE STREAM FOR SPAWNING OR MIGRATION.

DO NOT WORK WITHIN STREAMS DURING THE FOLLOWING CLOSURE DATES, INCLUSIVE, FOR ANY GIVEN YEAR.

A. USE I AND I-P: MARCH 1 TO JUNE 15.

B. USE II AND USE II-P: JUNE 1 TO SEPTEMBER 30 AND DECEMBER 16 TO MARCH 14.

C. USE III AND III-P: OCTOBER 1 TO APRIL 30.

D. USE IV AND IV-P: MARCH 1 TO MAY 31.

Additional Requirements:

- If multiple stream usages present, ensure each usage is in a distinct "Work Area"

Wetlands and Waterways

NOT NEEDED IN SEQUENCE!

9. SENSITIVE AREAS

WITH THE APPROVAL AND ASSISTANCE OF THE ENGINEER, COORDINATE WITH THE APPROPRIATE ADMINISTRATION REPRESENTATIVES AND WITH THE APPROPRIATE REGULATORY AGENCIES TO ENSURE THAT ALL PERMIT CONDITIONS ARE MET PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES WITHIN SPECIFIED SENSITIVE AREAS. SENSITIVE AREAS INCLUDE BUT ARE NOT IMITED TO FLOODPLAINS; WETLANDS; WETLAND BUFFERS; CHESAPEAKE BAY RITICAL AREA; FORESTS; TREE CONSERVATION AND PROTECTION AREAS; RCHEOLOGICAL SITES; HISTORIC SITES; PARKLAND; RARE, THREATENED, OR NDANGERED SPECIES AND CRITICAL HABITATS; OPEN WATERS; TIER II VATERSHEDS; IMPAIRED WATERS; STREAM PROTECTION ZONES; AND TORMWATER MANAGEMENT (SWM) FACILITIES.

NSURE THE ESCM MONITORS ALL WORK IN SENSITIVE AREAS AND ENSURE HAT REASONABLE CARE IS TAKEN DURING WORK IN AND ADJACENT TO ENSITIVE AREAS.

O NOT PLACE STOCKPILES OR OTHERWISE STORE MATERIALS OR EQUIPMENT WITHIN LOCATIONS OF SENSITIVE AREAS.

Additional Requirements:

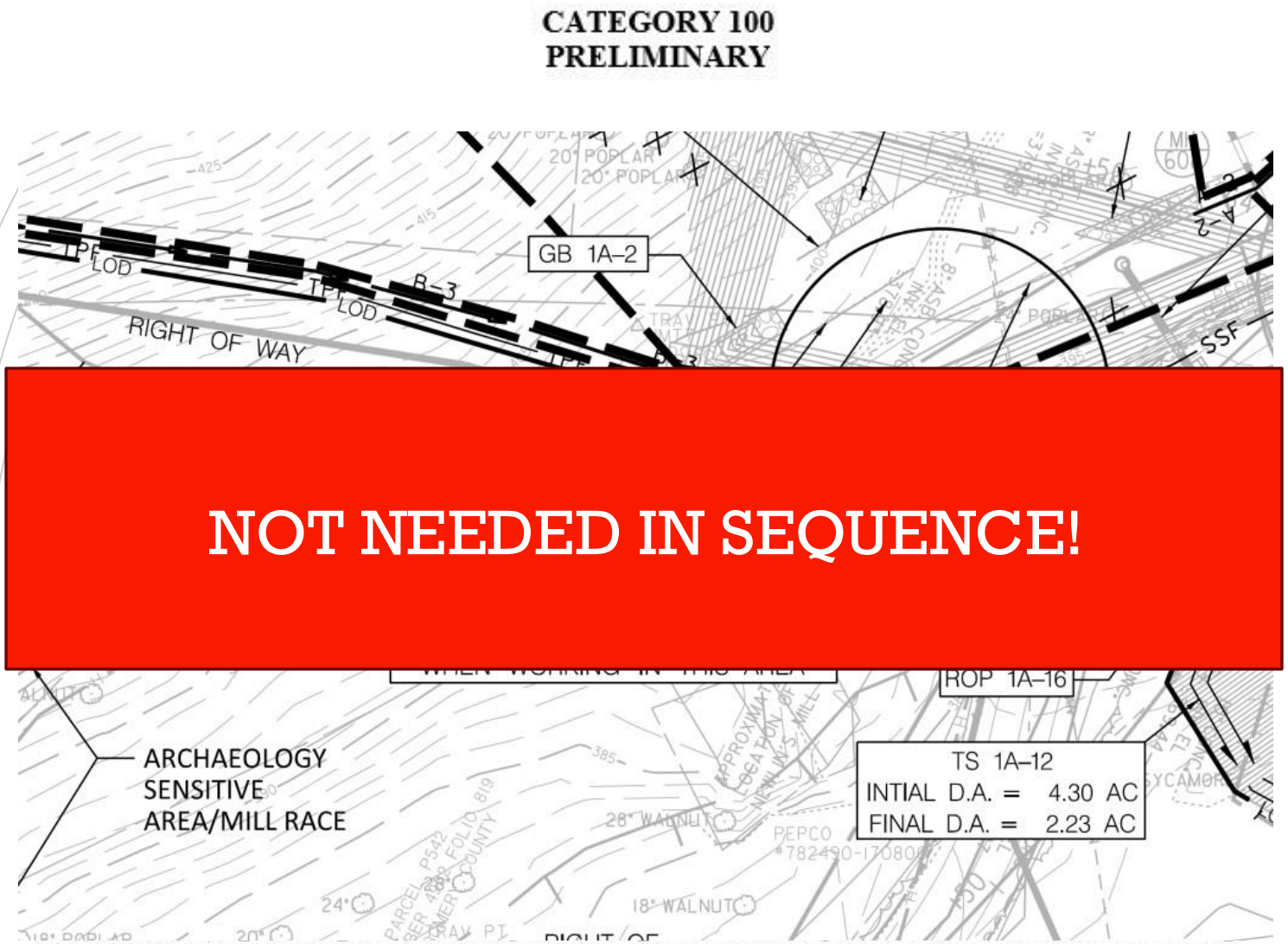
- 11 standard notes from MDE website to be included on applicable project plan sheets

NOT NEEDED IN SEQUENCE!

HAZMAT and Contaminated Soils

- **This should be handled in a Specification which will be project-specific, developed in coordination with OMT/HHD.**
  - **Additional Requirements:**
    - **Add following plan note:**

REMOVE AND DISPOSE OF CONTAMINATED SOILS (*AND GROUNDWATER*) ENCOUNTERED DURING EXCAVATION FROM STA (XX+XX – XX+XX) PER THE GUIDELINES OUTLINED IN THE SPECIFICATION



Historical and Cultural Areas

- Discussed in IFB SP 100 – Cultural Resources/Archeological Features
- Label areas of concern on the plans

NOT NEEDED IN SEQUENCE!

High Groundwater & Dewatering

- Dewatering for stormwater management facility construction is part of measurement and payment specification for Section 316; for locations where there is high groundwater visible on the soil borings a note on the plans will help contractor make an accurate bid.

  - Additional Requirements:

Add following note:

"PROJECT SOIL BORINGS INDICATE HIGH GROUNDWATER. PLAN CONSTRUCTION ACTIVITIES ACCORDINGLY TO ACCOUNT FOR ANY DEWATERING NEEDED."

Other Special Conditions/Notes:

- Storm Drain Construction
  - WHEN CONSTRUCTING STORM DRAIN SYSTEMS, ENSURE POSITIVE FLOW IS MAINTAINED
- Define NOAA 3-day dry weather forecast
  - NOAA 3-DAY DRY WEATHER FORECASTS ARE "DRY" WHEN THE PROBABILITY OF PRECIPITATION DURING EACH OF THE THREE CONSECUTIVE DAYS IS LESS THAN 20%

Definitions can be added to plan - NOT NEEDED IN SEQUENCE!

STABILIZATION: Let's Talk About It!

How Does Stabilization Relate To Flexible SOC?

- Using a Flexible Sequence requires clear, concise information be conveyed on the plans
- To clearly communicate information in areas where stabilization is needed, we must have a unified understanding of the definition of different types of "Stabilization" and which usage is appropriate

TEMPORARY STABILIZATION

INCREMENTAL STABILIZATION

TEMPORARY STABILIZATION

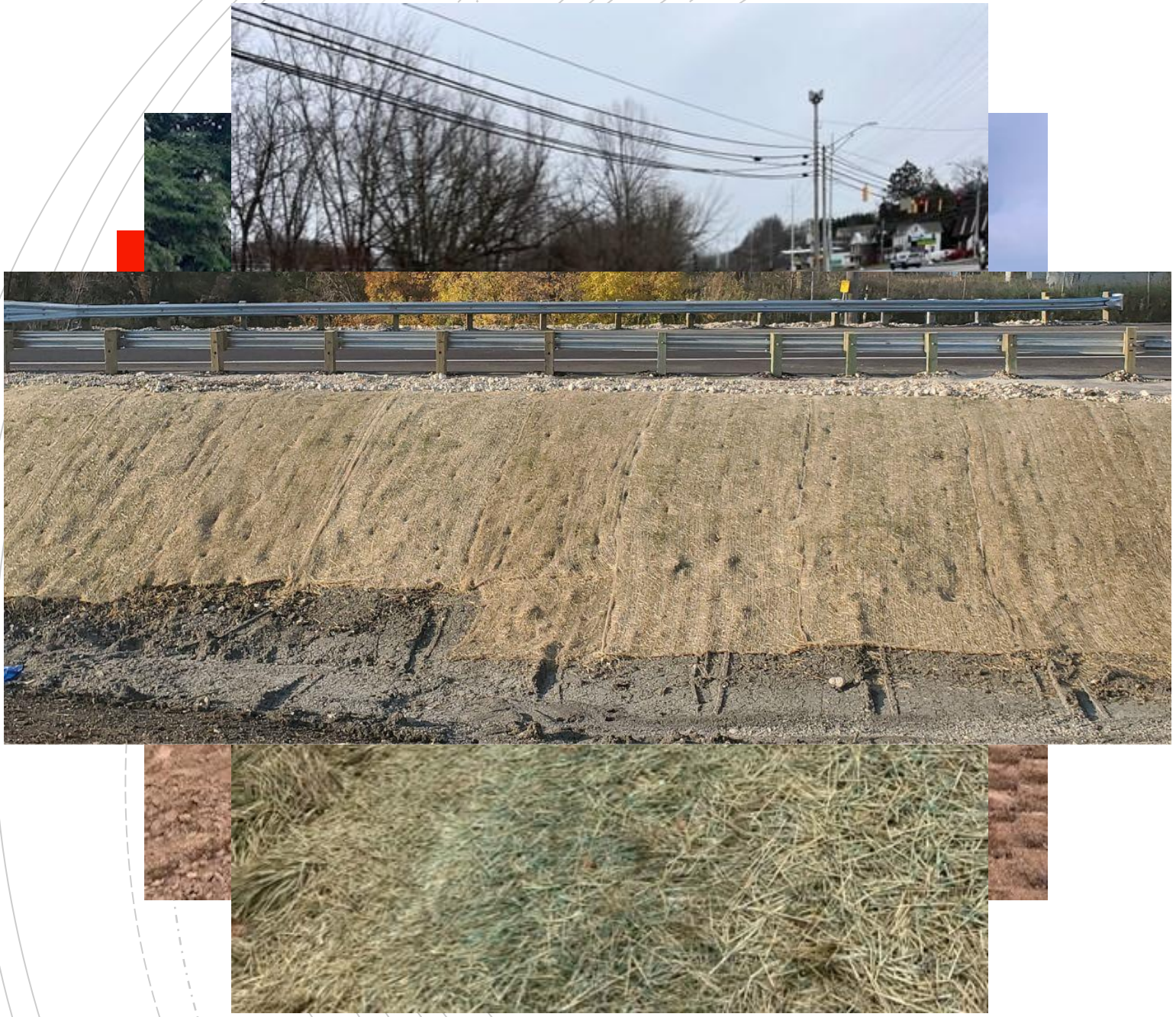
Category of stabilization used in long-term construction operations, for areas that will be re-disturbed at a later point in the construction process.

This type of stabilization uses items in Section 704

CATEGORY 700
LANDSCAPING

SECTION 704 — TEMPORARY MULCH AND TEMPORARY SEED

NOTE: TEMPORARY VEGETATION CANNOT BE IN PLACE LONGER THAN 6 MONTHS!



TEMPORARY STABILIZATION

Used in phased construction for areas that will be re-disturbed over time

B-4-4 STANDARDS AND SPECIFICATIONS

FOR

TEMPORARY STABILIZATION

PERMANENT STABILIZATION

FINAL STABILIZATION

SAME-DAY STABILIZATION

- Establishes the final landscaped condition
- Areas where permanent stabilization has been installed should not be re-disturbed

FINAL STABILIZATION

- Used at end of construction within a given work area
- Establishes final landscaped condition
- During construction, E&SC needs to be provided in these areas

SAME-DAY STABILIZATION

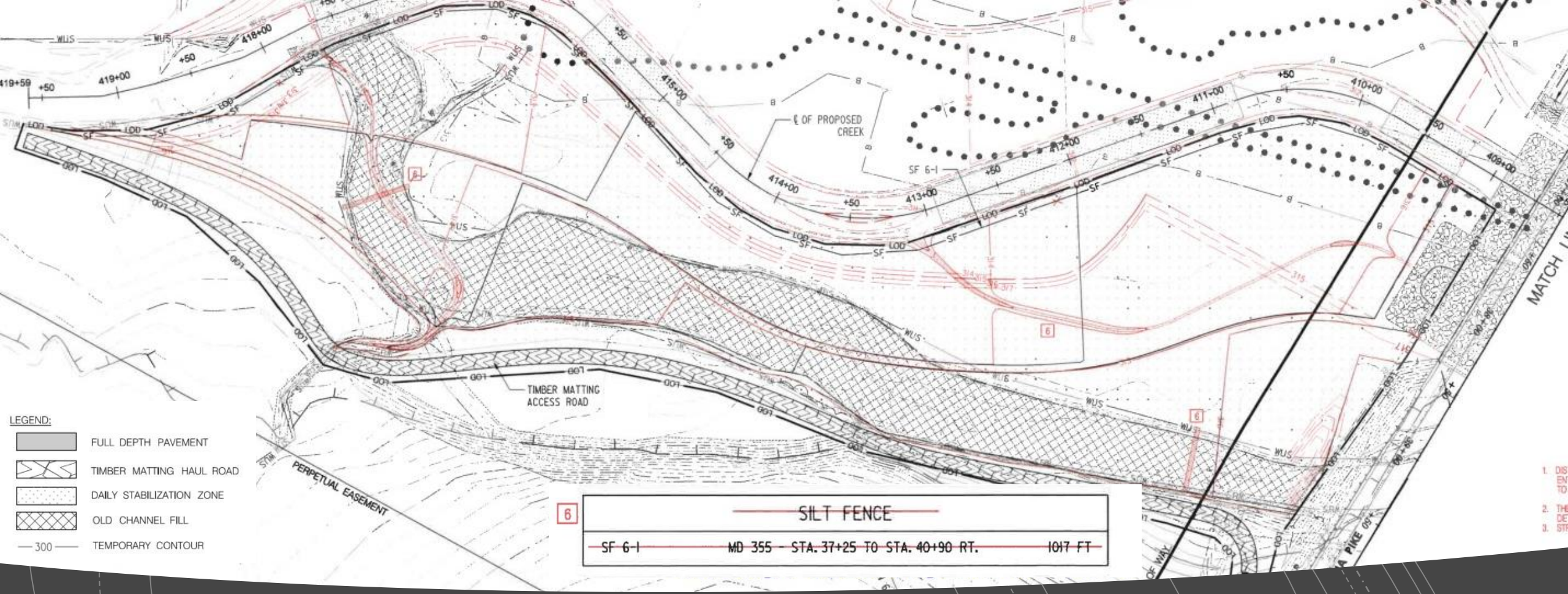
- Used at end of construction within a given work DAY
- Establishes final landscaped condition
- NO additional E&SC measures needed in these areas. Final planting is installed at the end of the day, rendering them "stable".

⑩ Include the following note on the plans:

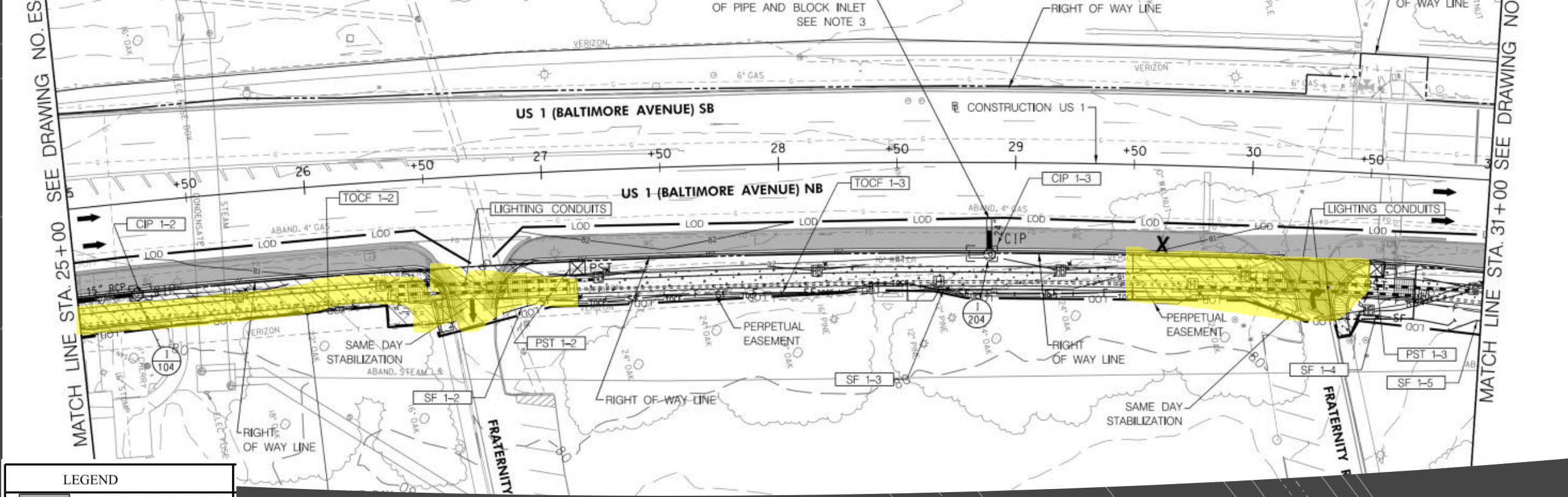
- PERMANENTLY STABILIZE AREAS IDENTIFIED FOR SAME DAY STABILIZATION BY THE END OF EACH WORKDAY. LIMIT DISTURBED AREAS TO ONLY WHAT IS WORKED THAT DAY. DO NOT RE-DISTURB AREAS OF SAME DAY STABILIZATION.

Is there a size limit for same day stabilization areas?

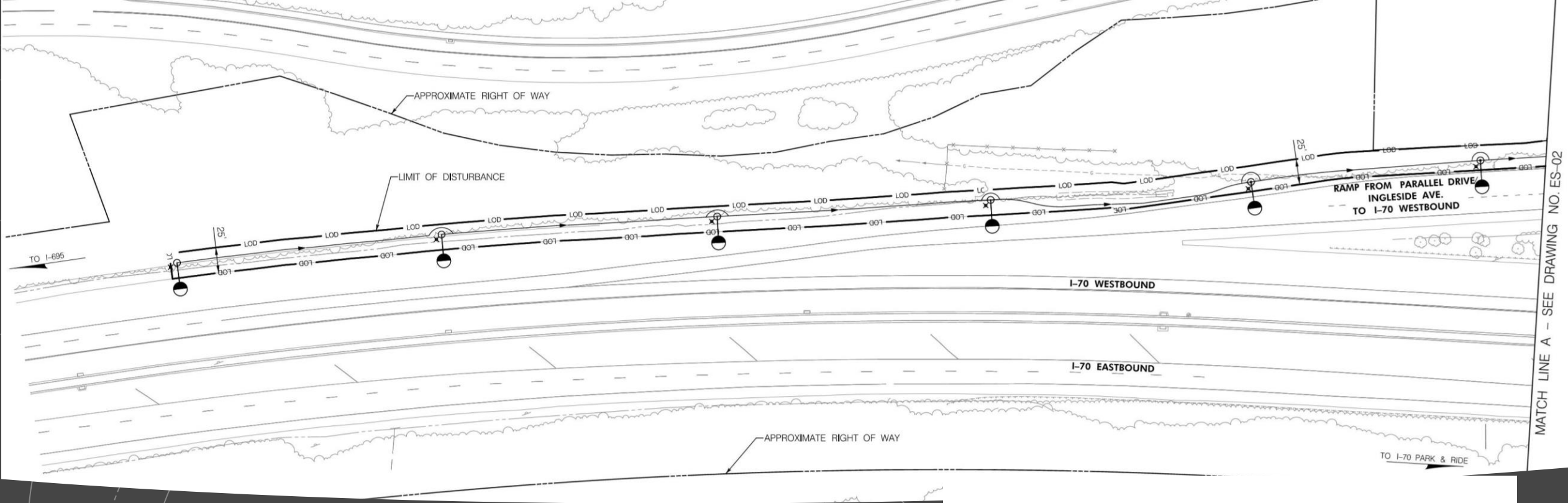
SAME DAY STABILIZATION



SAME DAY STABILIZATION



SAME DAY STABILIZATION



SAME DAY STABILIZATION

SEQUENCE OF CONSTRUCTION

1. NOTIFY THE REGIONAL ENVIRONMENTAL COORDINATOR IN ACCORDANCE WITH GENERAL NOTE 1 ON SHEET EN–01.
2. PERFORM ALL WORK IN ACCORDANCE WITH THESE PLANS UTILIZING SAME–DAY STABILIZATION. DO NOT CLEAR OR GRUB MORE AREA THAN CAN BE STABILIZED IN A SINGLE DAY. NO DISTURBED AREA MAY BE LEFT UNSTABILIZED OVERNIGHT.
3. IF UTILITY TRENCH OR CONDUIT DEWATERING IS REQUIRED, ENSURE EFFLUENT IS FILTERED THROUGH A FILTER BAG. ALL DISCHARGE FROM THE DEWATERING SHALL BE MADE IN A NON–EROSIVE MANNER.
4. COMPLETE FINAL STABILIZATION AND, WITH APPROVAL FROM THE REC, REMOVE REMAINING SEDIMENT CONTROLS AND PERMANENTLY STABILIZE THOSE AREAS.

ADDITIONAL STABILIZATION TERMS

- "Apply permanent stabilization"
  - The process of planting/landscaping your site… When you have planted 100% of the vegetated areas, you have "applied permanent stabilization"
- "Establishing stabilization"
  - Your site has been planted, and is currently growing
- "Permanently stabilized"
  - 95% stabilization of VEGETATED areas… not of the TOTAL DRAINAGE AREA (i.e., If your drainage area is 90% IA and 10% grass, you still need that 10% that is grass to be at 95% growth)

SWM FACILITY INSTALLATION

- "Install stormwater management facilities to final grades/ install filter media once drainage area is deemed to be permanently stabilized by QAD with concurrence from the as-built engineer."

How do you construct a stormwater facility without re-disturbing the area?

SEE YOU AFTER LUNCH!

FLEXIBLE SEQUENCING EXAMPLES

More examples of times when you do NOT need to add more details to your sequence!

DISCLAIMER:

"The Examples You Are About To See Are True.
The Consultants Names Have Been Changed To Protect The Innocent"

FINAL CONFIGURATION (TRAP REMOVAL AND SWM FACILITY CONSTRUCTION)

1. WITH THE APPROVAL OF THE QAD, STAKEOUT THE FINAL CONFIGURATION LOD.

2. CLEAR AND GRUB FOR AND INSTALL SSF.

3. AT I-7, BLOCK THE 24" RCP OUTFLOW PIPE AND UNBLOCK THE TEMPORARY 24" FLEXIBLE PIPE TO DIVERT CLEAN WATER TO EXISTING 36" RCP (AWAY FROM TRAP AND SWM FACILITY).

4. REMOVE SEDIMENT TRAP AND DEWATER AREA USING PST-1.

5. CONSTRUCT SWM FACILITY. ACCOMMODATE THE FOLLOWING CONSTRAINTS:

   a. AFTER CONSTRUCTED, BLOCK R-1 AS NEEDED TO PREVENT SEDIMENT LADEN WATER FROM EXITING THE SITE.

   b. DEWATER LOW POINTS USING A PST.

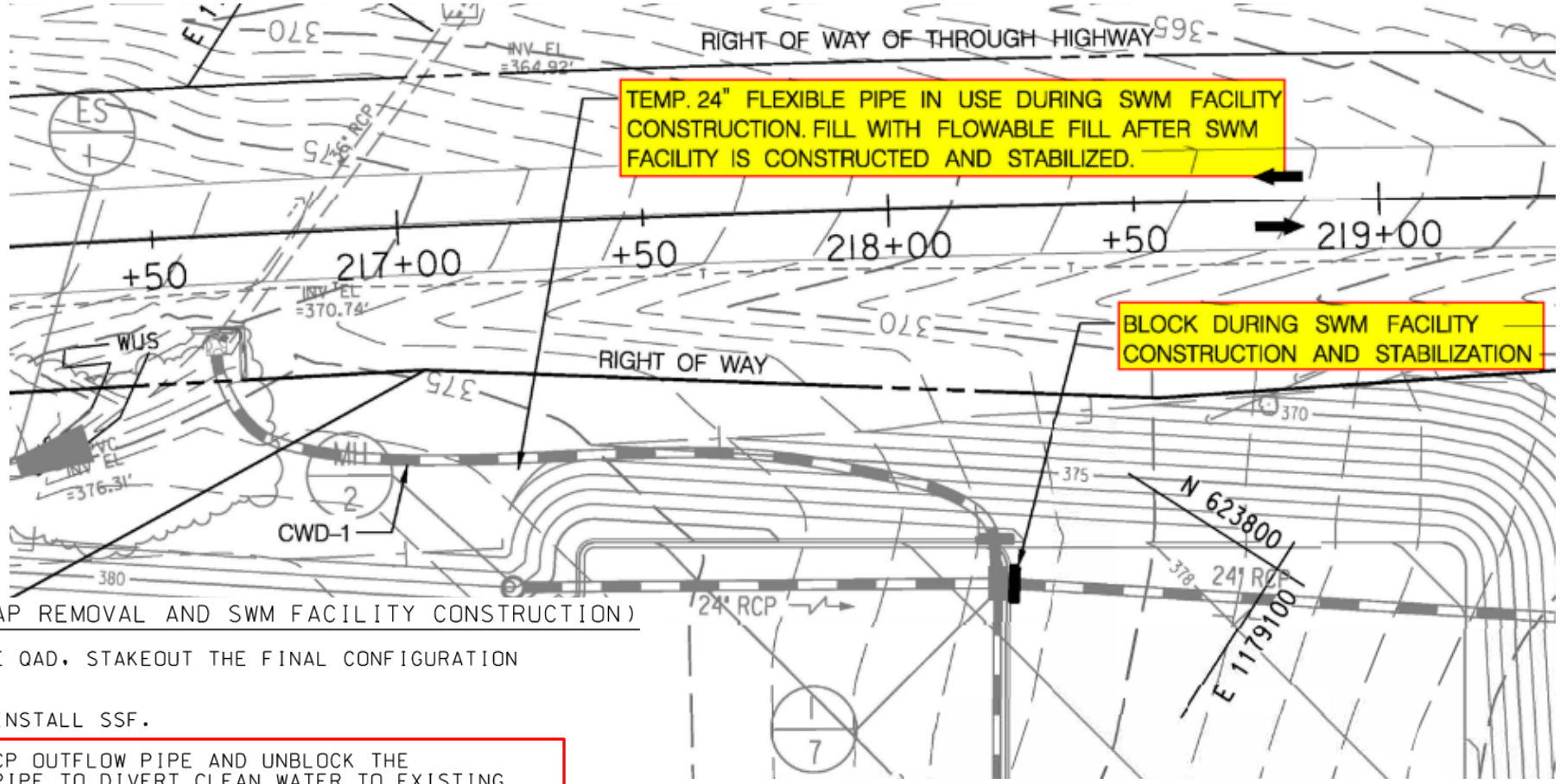
   c. AS WORK PROGRESSES AND ESC CONTROLS ARE NO LONGER NEEDED, WITH THE APPROVAL OF THE QAD, REMOVE THOSE CONTROLS AND PERMANAENTLY STABILIZE THOSE AREAS.

6. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF THE QAD, REMOVE REMAINING ESC CONTROLS, AND STABILIZE THOSE AREAS.

7. AT I-7, BLOCK THE TEMPORARY 24" FLEXIBLE PIPE AND UNBLOCK THE 24" RCP OUTFLOW PIPE TO DIVERT FLOW TO THE SWM FACILITY. FILL THE TEMPORARY 24" FLEXIBLE PIPE WITH FLOWABLE FILL.

SIMPLIFICATION OPPORTUNITY:

Temporary storm drain system Plan Notes



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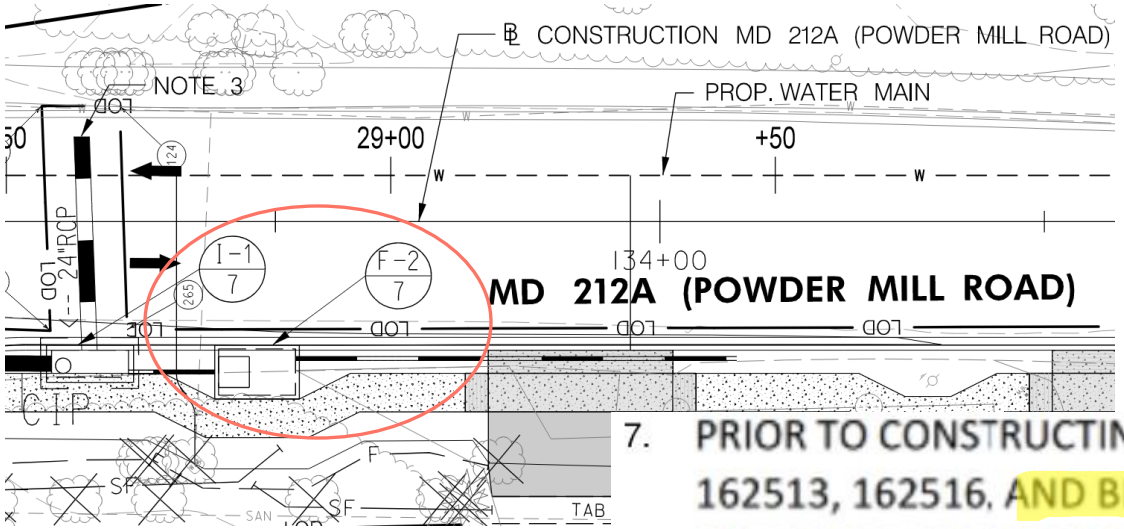

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SIMPLIFICATION OPPORTUNITY:

Inlets/Pipes being installed and/or blocked until later phase

SIMPLIFICATION OPPORTUNITY: PG1065184

SEQUENCE OF CONSTRUCTION

1. NOTIFY SHA QAD PER ESN–01 NOTE 2.

2. STAKE OUT LOD AND INSTALL TOCF. CLEAR AND GRUB TO INSTALL PERIMETER CONTROLS. WHERE TREE ROOT PRUNING IS SPECIFIED, PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS.

3. CLEAR AND GRUB TO INSTALL REMAINING PERIMETER CONTROLS AND INSTALL PERIMETER CONTROLS FOR EACH PHASE PRIOR TO PERFORMING WORK IN THAT PHASE. WORK MAY BE PERFORMED IN AREAS COVERED BY SAME DAY STABILIZATION PRIOR TO THE INSTALLATION OF PERIMETER CONTROLS AND INDEPENDENT OF THE SPECIFIED PHASES.

4. CLEAR AND GRUB TO INSTALL ALL REMAINING ESC FOR EACH PHASE PRIOR TO PERFORMING WORK IN THE RESPECTIVE PHASE.

5. WORK IN EACH PHASE MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIED CONTROLS MUST BE INSTALLED.

6. PRIOR TO CONSTRUCTION SWM FACILITIES, ~~BMPS 162512, 162510, 162511, 162514, 162515, 162513, 162516, AND BIORETENTION INLET FILTER OPENINGS (E.G. F–1–2)~~, PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO THE SWM FACILITIES, ENSURE ALL PIPES AND INLETS HAVE BEEN CLEANED, THAT ALL ASSOCIATED DRAINAGE STRUCTURES HAVE BEEN CONSTRUCTED, AND ALL INLETS FLOWING INTO THE SWM FACILITIES ARE TEMPORARILY BLOCKED. CONSTRUCT SWM FACILITIES, PERMANENTLY STABILIZE, AND CONNECT TO THE STORM DRAIN SYSTEM, UNBLOCKING ANY STRUCTURES THAT WERE TEMPORARILY BLOCKED.

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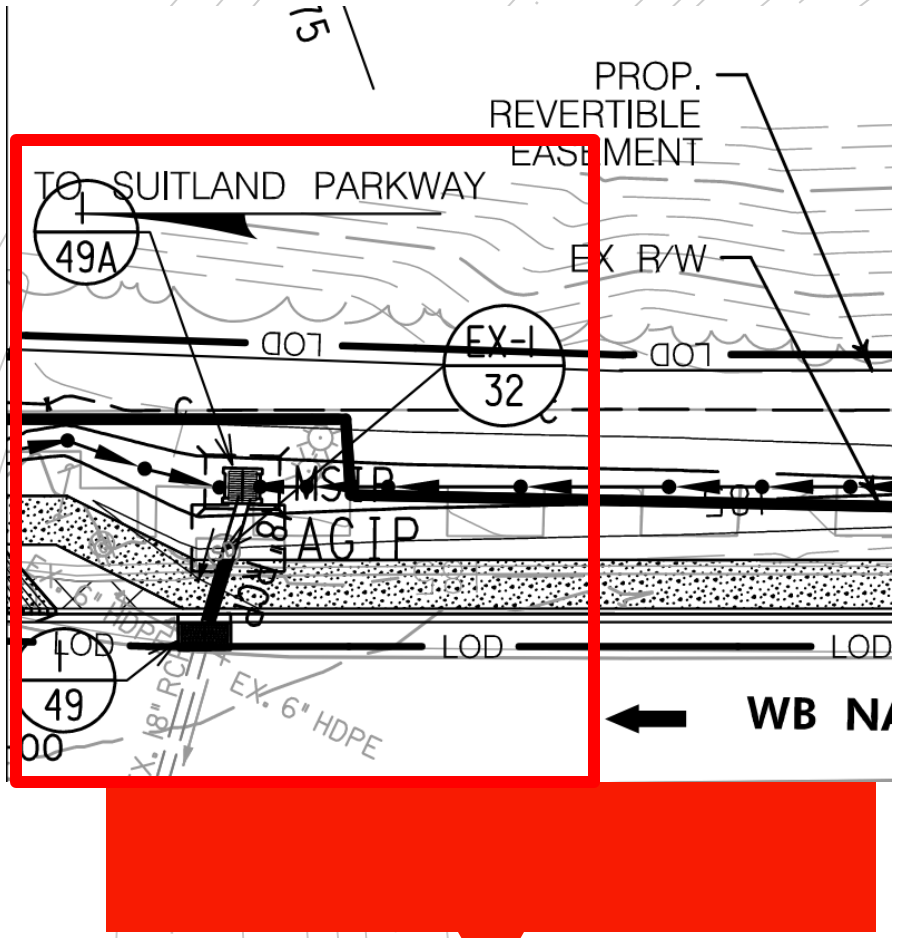


Plan Notes

CONTRACTOR SHALL REMOVE AGIP AT EX–I–32 ONCE PROPOSED STORMDRAIN FROM I–49–A TO I–49 IS INSTALLED AND INSTALL MSIP AT I–49–A

SEQUENCE OF CONSTRUCTION

1. NOTIFY THE MDOT SHA QUALITY ASSURANCE DIVISION (QAD) IN WRITING AND/OR BY TELEPHONE (410)-537-3510 AT LEAST 7 WORKING DAYS PRIOR TO ANY LAND DISTURBING ACTIVITY.
2. STAKE OUT THE LOD. CLEAR AND GRUB IN LOCATIONS OF PERIMETER CONTROLS AND INSTALL PERIMETER CONTROLS INCLUDING INLET PROTECTIONS FOR EXISTING INLETS PRIOR TO PERFORMING OTHER CONSTRUCTION ACTIVITIES. CLEARING AND GRUBBING FOR CONSTRUCTION ACTIVITIES TO TAKE PLACE IN AREAS WHERE PERIMETER CONTROLS HAVE BEEN SET UP.
3. INSTALL INLET PROTECTION AS DRAINAGE STRUCTURES GET INSTALLED.

SIMPLIFICATION EXAMPLE PG7825284:

Locations where detailed notes on specific plan sheets preferred instead of detailed SOC instruction

EXAMPLE: MO5935870

SEQUENCE OF CONSTRUCTION STAGE 2

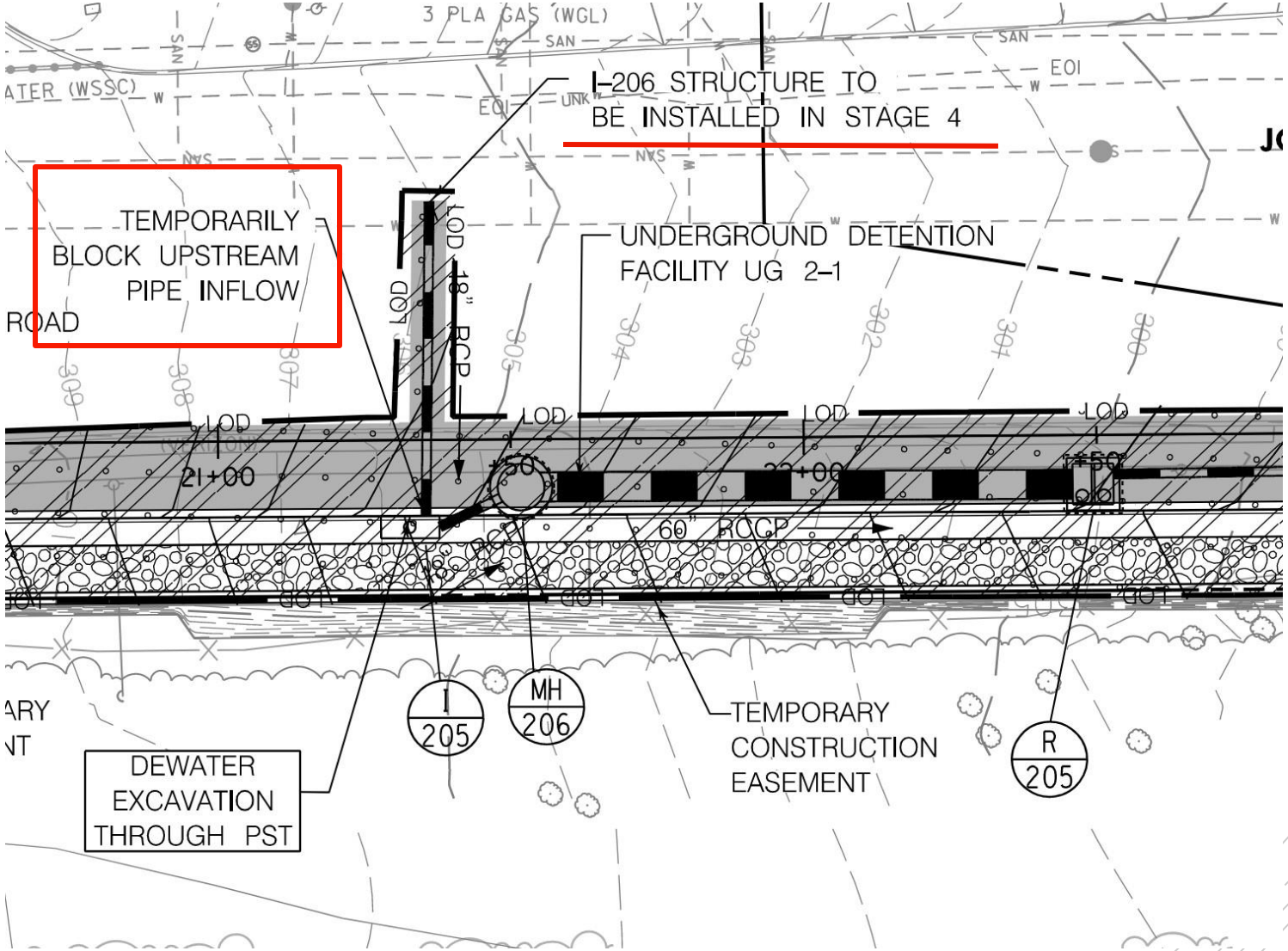
1. STAKE OUT THE LOD AND INSTALL TOCF.

2. CLEAR AND GRUB TO INSTALL PERIMETER CONTROLS. AS WORK PROGRESSES IN ACCORDANCE WITH STEP 3, PERFORM TREE ROOT PRUNING AND INSTALL REMAINING CONTROLS PRIOR TO DISTURBANCE OF THE AREA THEY PROTECT.

3. PERFORM WORK ACCOMMODATING THE FOLLOWING CONSTRAINTS.
   A. TEMPORARILY BLOCK STORM DRAIN PIPES AS SPECIFIED.
   B. BLOCK FLOW TO AND FROM TD 402 UNTIL CONSTRUCTION OF ESD-3-2 IS COMPLETED.
   C. CLEAN THE STORM DRAIN SYSTEM IN A MANNER THAT DOES NOT RESULT IN SEDIMENT LEAVING THE SITE NOR ENTERING ESD-3-2.
   D. CONSTRUCT ESD-3-2 DURING A 3-DAY NOAA DRY WEATHER FORECAST AFTER ALL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.
   E. CONSTRUCT THE PERMEABLE SIDEWALK AT THE END OF STAGE 2 WORK AND WHEN UPSTREAM AREAS ARE PERMANENTLY STABILIZED. THE CONTRACTOR MAY ELECT TO CONSTRUCT THE PERMEABLE SIDEWALK IN SEGMENTS AT ANY POINT DURING STAGE 2 WORK IF IT IS CONTINUOUSLY PROTECTED FROM SEDIMENT CONTAMINATION AND THE METHOD USED HAS BEEN APPROVED BY THE QUALITY ASSURANCE DIVISION (QAD).

4. PERMANENTLY STABILIZE REMAINING DISTURBED AREAS. WITH THE APPROVAL OF THE REC, REMOVE ESC AND PERMANENTLY STABILIZE THOSE AREAS.

FLEXIBLE SEQUENCE EXAMPLE: MO5935870



Could these "Constraints" be Plan Notes?

SEQUENCE OF CONSTRUCTION STAGE 2

1. STAKE OUT THE LOD AND INSTALL TOCF.

2. CLEAR AND GRUB TO INSTALL PERIMETER CONTROLS. AS WORK PROGRESSES IN ACCORDANCE WITH STEP 3, PERFORM TREE ROOT PRUNING AND INSTALL REMAINING CONTROLS PRIOR TO DISTURBANCE OF THE AREA THEY PROTECT.

3. PERFORM WORK ACCOMMODATING THE FOLLOWING CONSTRAINTS.
   A. TEMPORARILY BLOCK STORM DRAIN PIPES AS SPECIFIED.
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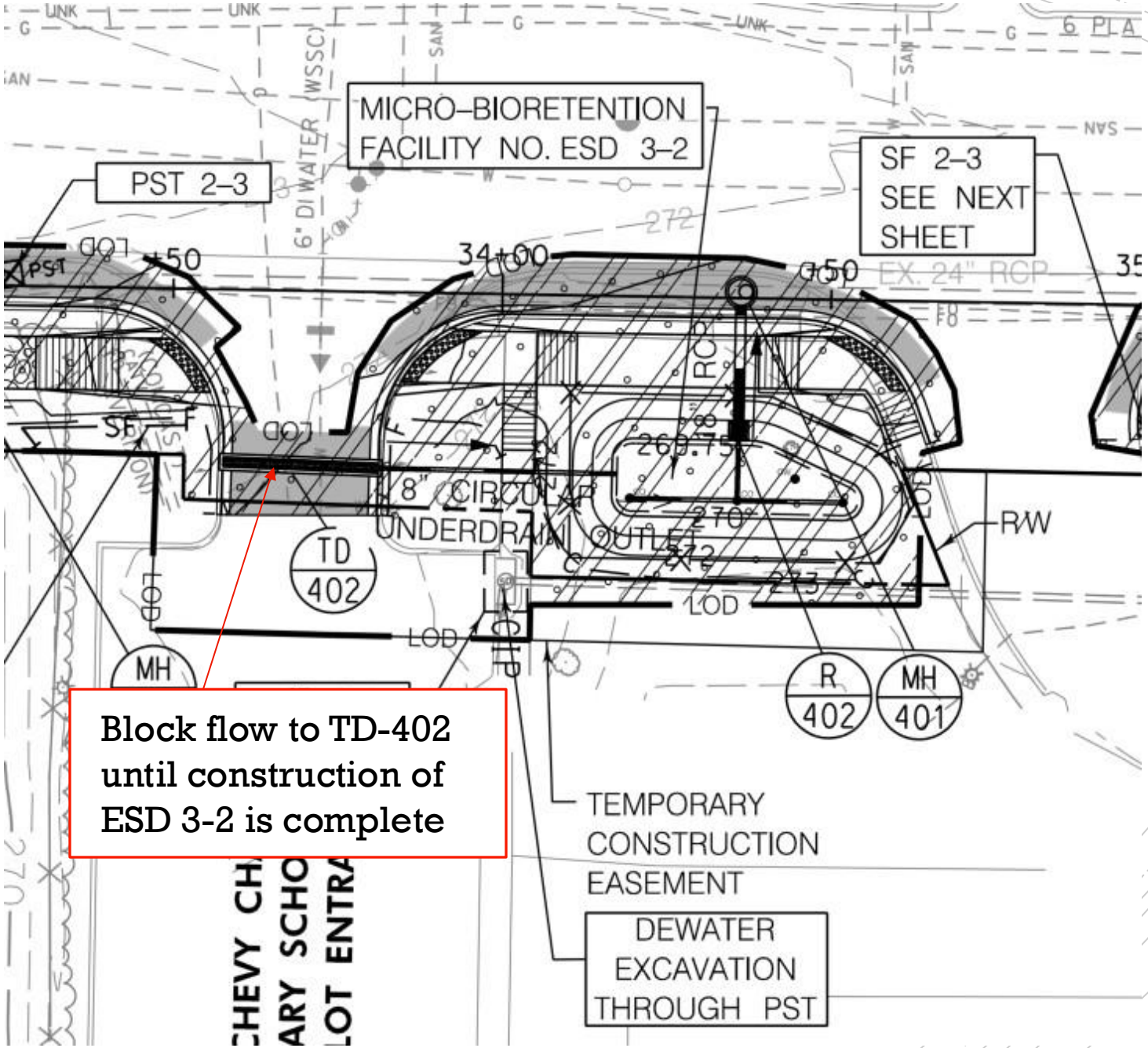
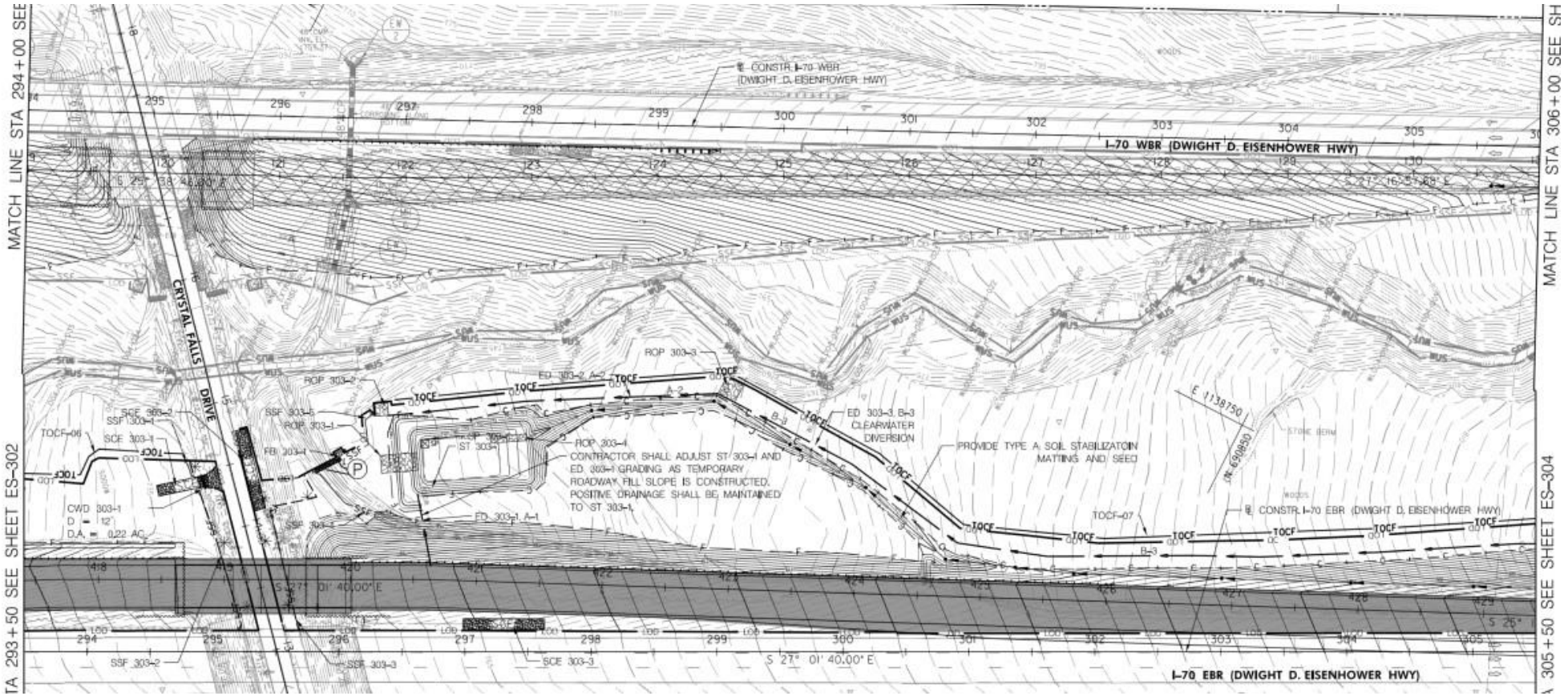
FLEXIBLE SEQUENCE EXAMPLE: MO5935870



BREAKOUT SESSIONS:

Not sure where to go? Look at your badge!

AFTER LUNCH GO TO BREAKOUT ROOMS

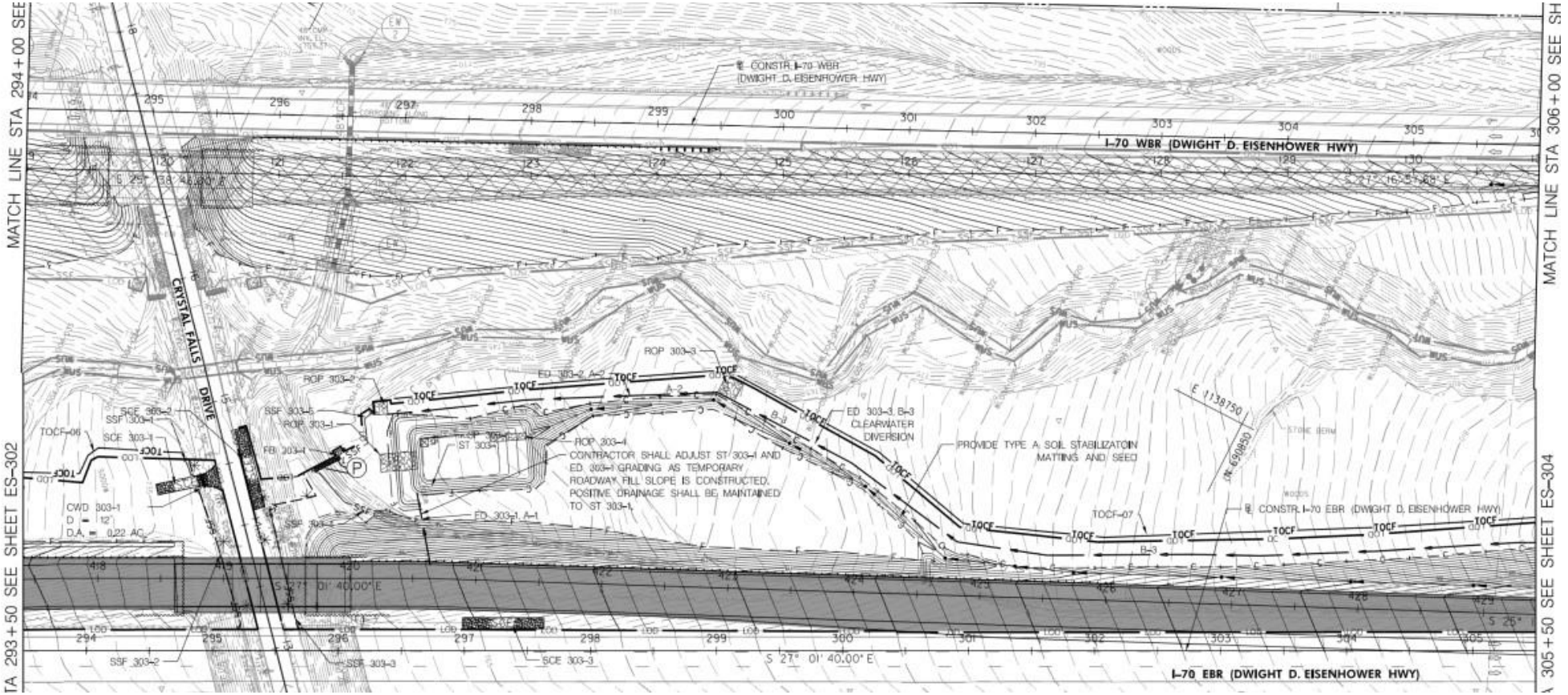


SIMPLIFICATION ISSUE:

Situations where design materials (fill, etc.) from previous phasing may be needed for later phases

3. GRADING OPERATIONS ALONG I-70 EASTBOUND AND WESTBOUND INCLUDING TEMPORARY RETAINING WALL CONSTRUCTION MAY OCCUR CONCURRENTLY IN ANY STAGES PROVIDED THAT ALL REQUIRED EROSION AND SEDIMENT CONTROLS ARE INSTALLED AND APPROVED BY SHA QAD.

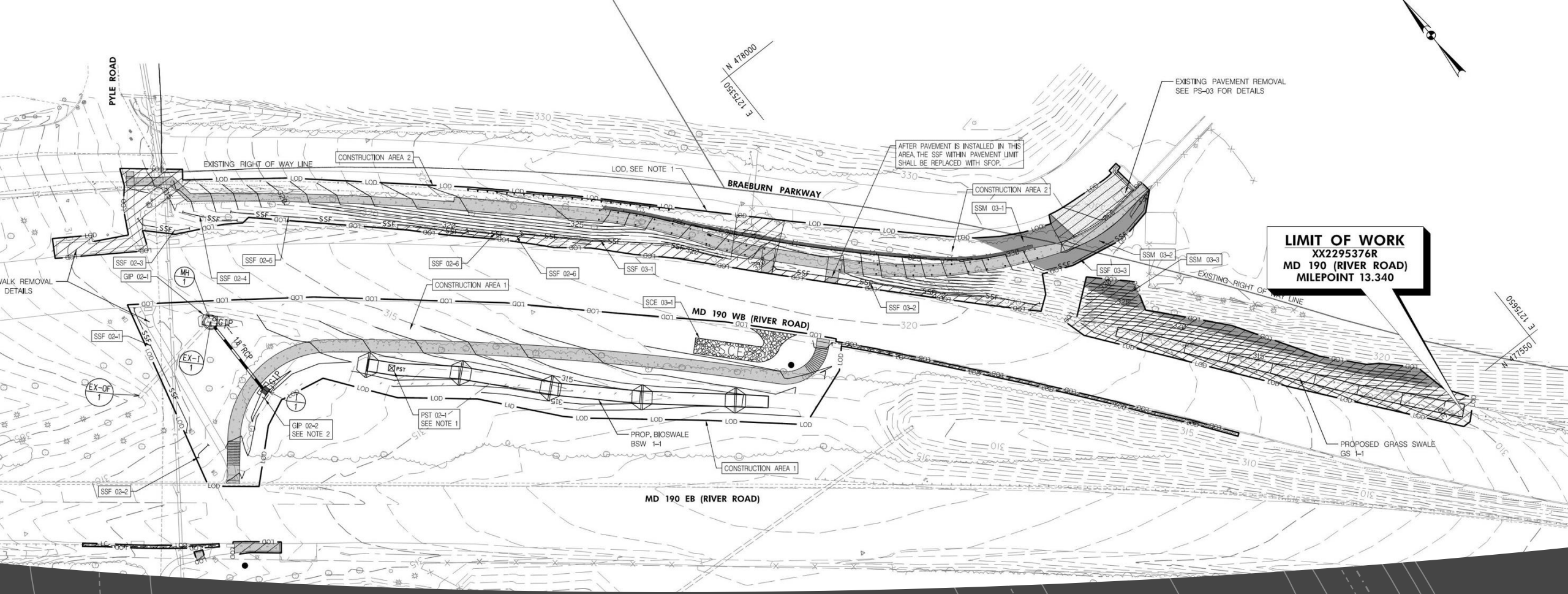
4. WITH APPROVAL FROM THE ENGINEER AND SHA QAD, CONTRACTOR MAY CONSTRUCT EASTBOUND AND WESTBOUND TEMPORARY ROADWAYS CONCURRENTLY. ALL REQUIRED EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED AND APPROVED BY SHA QAD AS IN CONCURRENT GRADING OPERATIONS.



SOLUTION:

3. GRADING OPERATIONS ALONG I-70 EASTBOUND AND WESTBOUND INCLUDING TEMPORARY RETAINING WALL CONSTRUCTION MAY OCCUR CONCURRENTLY IN ANY STAGES PROVIDED THAT ALL REQUIRED EROSION AND SEDIMENT CONTROLS ARE INSTALLED AND APPROVED BY SHA QAD.

4. WITH APPROVAL FROM THE ENGINEER AND SHA QAD, CONTRACTOR MAY CONSTRUCT EASTBOUND AND WESTBOUND TEMPORARY ROADWAYS CONCURRENTLY AT NO ADDITIONAL COST TO THE ADMINISTRATION. NOTE THAT QUANTITIES PRESENTED ON THESE PLANS ARE REPRESENTATIVE OF THE SPECIFIC DESIGN SHOWN; ALL REQUIRED EROSIONS AND SEDIMENT CONTROL SHALL BE INSTALLED AND APPROVED BY SHA QAD AS IN CONCURRENT GRADING OPERATIONS.



Example Project – MD 190 Intersection Improvements

- Breakout groups will spend ~30 minutes simplifying the SOC for this project

SEQUENCE OF CONSTRUCTION
EROSION AND SEDIMENT CONTROL

NOTES

1. ONLY MINOR CLEARING AND GRUBBING SHALL OCCUR FOR THE INSTALLATION OF THE EROSION AND SEDIMENT CONTROL (ESC) MEASURES, AND ALL ESC MEASURES AND DEVICES SHALL BE IN PLACE AND FUNCTIONING PROPERLY FOR EACH CONSTRUCTION PHASE PRIOR TO MASS CLEARING AND GRUBBING OF THE WORKING AREA FOR THAT PHASE AND COMMENCING ANY CONSTRUCTION ACTIVITIES.
2. MAINTAIN ALL SEDIMENT CONTROL PRACTICES ACCORDING TO THE MARYLAND 2011 STANDARDS UNTIL THE ENTIRE SITE IS STABILIZED.
3. CLEAR AND GRUB AND PROCEED TO CONSTRUCTION ACCORDING TO THE SEQUENCE SPECIFIED ON THE MAINTENANCE OF TRAFFIC (MOT) PLANS.
4. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL USE PORTABLE SEDIMENT TANKS OR SUMP PITS TO DEWATER AREAS OF TRAPPED SEDIMENT LADEN WATER DURING CONSTRUCTION. ALL DEWATERING SHALL BE DISCHARGED TO A STABLE OUTFALL APPROVED BY THE SHA QUALITY ASSURANCE DIVISION (QAD).
5. UTILITIES AND STORM DRAINS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS ARE FOR THE GUIDANCE OF THE CONTRACTOR ONLY. ALL UTILITIES SHALL BE CONSTRUCTED AS SHOWN ON THE ROADWAY PLANS.
6. CONTRACTOR SHALL LOCATE THE STAGING AND STOCKPILE AREAS UPON SHA QAD 'S APPROVAL. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY ADDITIONAL EROSION AND SEDIMENT CONTROLS FOR STAGING AND STOCKPILE AREAS AS REQUIRED BY THE SHA QAD.

SEQUENCE OF CONSTRUCTION

1. THE CONTRACTOR SHALL NOTIFY SHA QUALITY ASSURANCE DIVISION (QAD) AT (410) 365-0164 A MINIMUM OF SEVEN (7) DAYS PRIOR TO ANY EARTH DISTURBANCE TO SET UP A PRE-CONSTRUCTION MEETING, UNLESS WAIVED BY QAD.
2. STAKEOUT LOD AND INSTALL TOCF. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMIT OF TOCF.
3. WORK IN EACH CONSTRUCTION AREA MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIED CONTROLS MUST BE INSTALLED.
4. IN AREAS WHERE HIGHLY EROSIVE SOILS EXIST, STABILIZE WITH SSM IMMEDIATELY UPON COMPLETING GRADING (AS SHOWN IN LIGHT GRAY SHADED AREA ON ES-03).

CONSTRUCTION AREA 1 (SEE ES-02 AND ES-03)

1. CLEAR AND GRUB TO INSTALL ALL ESC IN CONSTRUCTION AREA 1, EXCEPT THAT INLET PROTECTION GIP 02-2 SHALL BE INSTALLED IMMEDIATELY AFTER INLET I-1 IS INSTALLED, AND PST 02-1 SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF THE BIO-SWALE. WHERE TREE ROOT PRUNING IS SPECIFIED, PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMIT OF TREE ROOT PRUNNING.
2. PERFORM PROPOSED CONSTRUCTION AS SHOWN ON THE PLANS EXCEPT FOR THE CROSS HATCHED AREA ON ES-02.
3. PRIOR TO CONSTRUCTING BSW 1-1, PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO THE FACILITY. CONSTRUCT AND PERMANENTLY STABILIZE BSW 1-1. WITH THE APPROVAL OF THE QAD, REMOVE PST 02-1, COMPLETE THE REMAINING BSW 1-1 CONSTRUCTION, AND PERMANENTLY STABILIZE THOSE AREAS.
4. DURING A 3-DAY NOAA DRY WEATHER FORECAST, WITH THE APPROVAL OF THE QAD, REMOVE GIP 02-1. PERFORM PROPOSED CONSTRUCTION AS SHOWN IN THE CROSS HATCHED AREA ON ES-02.
5. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF THE QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

CONSTRUCTION AREA 2 (SEE ES-02 AND ES-03)

1. CLEAR AND GRUB TO INSTALL ALL SSF IN CONSTRUCTION AREA 2. WHERE TREE ROOT PRUNING IS SPECIFIED, PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMIT OF TREE ROOT PRUNNING.
2. PERFORM GRADING AS SHOWN IN THE HATCHED AREAS USING “SAME DAY STABILIZATION” METHOD. SSF WITHIN GRADING LIMIT SHALL BE ADJUSTED AS NEEDED DURING CONSTRUCTION. ALL DISTURBED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY.
3. PERFORM PROPOSED CONSTRUCTION AS SHOWN ON THE PLANS. ANY DISTURBANCE WITHIN HATCHED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY.
4. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF THE QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

ALL REMAINING CONSTRUCTION AREAS

ALL WORK PROPOSED SHALL BE PERFORMED USING "SAME DAY STABILIZATION" METHOD. ALL DISTURBED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY OR DIRECTED TO AN MDE-APPROVED DEWATERING DEVICE.

ARE ANY STEPS REDUNDANT WITH GENERAL NOTES/WOULD WORK BETTER AS A PLAN NOTE?

SEQUENCE OF CONSTRUCTION
EROSION AND SEDIMENT CONTROL

NOTES

1. ONLY MINOR CLEARING AND GRUBBING SHALL OCCUR FOR THE INSTALLATION OF THE EROSION AND SEDIMENT CONTROL (ESC) MEASURES, AND ALL ESC MEASURES AND DEVICES SHALL BE IN PLACE AND FUNCTIONING PROPERLY FOR EACH CONSTRUCTION PHASE PRIOR TO MASS CLEARING AND GRUBBING OF THE WORKING AREA FOR THAT PHASE AND COMMENCING ANY CONSTRUCTION ACTIVITIES.
2. MAINTAIN ALL SEDIMENT CONTROL PRACTICES ACCORDING TO THE MARYLAND 2011 STANDARDS UNTIL THE ENTIRE SITE IS STABILIZED.
3. CLEAR AND GRUB AND PROCEED TO CONSTRUCTION ACCORDING TO THE SEQUENCE SPECIFIED ON THE MAINTENANCE OF TRAFFIC (MOT) PLANS.
4. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL USE PORTABLE SEDIMENT TANKS OR SUMP PITS TO DEWATER AREAS OF TRAPPED SEDIMENT LADEN WATER DURING CONSTRUCTION. ALL DEWATERING SHALL BE DISCHARGED TO A STABLE OUTFALL APPROVED BY THE SHA QUALITY ASSURANCE DIVISION (QAD).
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7. WHERE TREE ROOT PRUNING IS SPECIFIED (SEE LANDSCAPE PLANS), PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS.
8. WORK IN EACH CONSTRUCTION AREA MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIED CONTROLS MUST BE INSTALLED.
9. IN AREAS WHERE HIGHLY EROSIVE SOILS EXIST, STABILIZE WITH SSM IMMEDIATELY UPON COMPLETING GRADING.
10. PERFORM GRADING AS SHOWN IN THE HATCHED AREAS USING "SAME DAY STABILIZATION" METHOD. SSF WITHIN GRADING LIMIT SHALL BE ADJUSTED AS NEEDED DURING CONSTRUCTION. ALL DISTURBED AREA WITHIN HATCHED AREAS SHALL BE STABILIZED VIA FINAL PLANTING METHODS AT THE END OF EACH WORK DAY.

SEQUENCE OF CONSTRUCTION

1. THE CONTRACTOR SHALL NOTIFY SHA QUALITY ASSURANCE DIVISION (QAD) ~~AT (410) 365-0164 A MINIMUM OF SEVEN (7) DAYS PRIOR TO ANY EARTH DISTURBANCE TO SET UP A PRE-CONSTRUCTION MEETING, UNLESS WAIVED BY QAD.~~ PER GENERAL NOTE 2
2. STAKEOUT LOD AND INSTALL TOCF. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMIT OF TOCF.
3. ~~WORK IN EACH CONSTRUCTION AREA MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIED CONTROLS MUST BE INSTALLED.~~
4. ~~IN AREAS WHERE HIGHLY EROSIVE SOILS EXIST, STABILIZE WITH SSM IMMEDIATELY UPON COMPLETING GRADING (AS SHOWN IN LIGHT GRAY SHADED AREA ON ES-03).~~

CONSTRUCTION AREA 1 (SEE ES-02 AND ES-03)

1. ~~CLEAR AND GRUB TO~~ INSTALL ALL ESC IN CONSTRUCTION AREA 1, EXCEPT THAT INLET PROTECTION GIP 02-2 SHALL BE INSTALLED IMMEDIATELY AFTER INLET I-1 IS INSTALLED, AND PST 02-1 SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF THE BIO-SWALE. ~~WHERE TREE ROOT PRUNING IS SPECIFIED, PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMIT OF TREE ROOT PRUNNING.~~
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3. PRIOR TO CONSTRUCTING BSW 1-1, PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO THE FACILITY. CONSTRUCT AND PERMANENTLY STABILIZE BSW 1-1. WITH THE APPROVAL OF THE QAD, REMOVE PST 02-1, COMPLETE THE REMAINING BSW 1-1 CONSTRUCTION, AND PERMANENTLY STABILIZE THOSE AREAS.
4. DURING A 3-DAY NOAA DRY WEATHER FORECAST, WITH THE APPROVAL OF THE QAD, REMOVE GIP 02-1. PERFORM PROPOSED CONSTRUCTION AS SHOWN IN THE CROSS HATCHED AREA ON ES-02.
5. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF THE QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

CONSTRUCTION AREA 2 (SEE ES-02 AND ES-03)

1. ~~CLEAR AND GRUB TO~~ INSTALL ALL SSF IN CONSTRUCTION AREA 2. ~~WHERE TREE ROOT PRUNING IS SPECIFIED, PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMIT OF TREE ROOT PRUNNING.~~
2. ~~PERFORM GRADING AS SHOWN IN THE HATCHED AREAS USING "SAME DAY STABILIZATION" METHOD. SSF WITHIN GRADING LIMIT SHALL BE ADJUSTED AS NEEDED DURING CONSTRUCTION. ALL DISTURBED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY.~~
3. PERFORM PROPOSED CONSTRUCTION AS SHOWN ON THE PLANS. ANY DISTURBANCE WITHIN HATCHED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY.
4. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF THE QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

~~ALL REMAINING CONSTRUCTION AREAS~~

~~ALL WORK PROPOSED SHALL BE PERFORMED USING "SAME DAY STABILIZATION" METHOD. ALL DISTURBED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY OR DIRECTED TO AN MDE-APPROVED DEWATERING DEVICE.~~

Direct Contractor to General Note #2

Tree root pruning, and general sequence items 3 and 4 should be plan notes.

Redundant with note 1.

Same-day stabilization pattern definition should be plan note.

No need to call out these "additional areas" as they are covered by previous steps/note 10

ARE THERE ANY STEPS THAT PROVIDE A TIMING RESTRICTION THAT ISN'T NECESSARY?

SEQUENCE OF CONSTRUCTION
EROSION AND SEDIMENT CONTROL

NOTES

1. ONLY MINOR CLEARING AND GRUBBING SHALL OCCUR FOR THE INSTALLATION OF THE EROSION AND SEDIMENT CONTROL (ESC) MEASURES, AND ALL ESC MEASURES AND DEVICES SHALL BE IN PLACE AND FUNCTIONING PROPERLY FOR EACH CONSTRUCTION PHASE PRIOR TO MASS CLEARING AND GRUBBING OF THE WORKING AREA FOR THAT PHASE AND COMMENCING ANY CONSTRUCTION ACTIVITIES.
2. MAINTAIN ALL SEDIMENT CONTROL PRACTICES ACCORDING TO THE MARYLAND 2011 STANDARDS UNTIL THE ENTIRE SITE IS STABILIZED.
3. CLEAR AND GRUB AND PROCEED RO CONSTRUCTION ACCORDING TO THE SEQUENCE SPECIFIED ON THE MAINTENANCE OF TRAFFIC (MOT) PLANS.
4. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL USE PORTABLE SEDIMENT TANKS OR SUMP PITS TO DEWATER AREAS OF TRAPPED SEDIMENT LADEN WATER DURING CONSTRUCTION. ALL DEWATERING SHALL BE DISCHARGED TO A STABLE OUTFALL APPROVED BY THE SHE QUALITY ASSURANCE DIVISION (QAD).
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7. WHERE TREE ROOT PRUNING IS SPECIFIED (SEE LANDSCAPE PLANS), PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS.
8. WORK IN EACH CONSTRUCTION AREA MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIES CONTROLS MUST BE INSTALLED.
9. IN AREAS WHERE HIGHLY ERODIBLE SOILS EXIST, STABILIZE WITH SSM IMMEDIATELY UPON COMPLETING GRADING.
10. PERFORM GRADING AS SHOWN IN THE HATCHED AREAS USING "SAME DAY STABILIZATION" METHOD. SSF WITHIN GRADING LIMIT SHALL BE ADJUSTED AS NEEDED DURING CONSTRUCTION. ALL DISTURBED AREA WITHIN HATCHED AREAS SHALL BE STABILIZED VIA. FINAL PLANTING METHODS AT THE END OF EACH WORK DAY.

SEQUENCE OF CONSTRUCTION

1. THE CONTRACTOR SHALL NOTIFY SHA'S QUALITY ASSURANCE DIVISION PER GENERAL NOTE 2
2. STAKEOUT LOD AND INSTALL TOCF. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMITS OF TOCF.

CONSTRUCTION AREA 1 (SEE ES-02 AND ES-03)

1. INSTALL ESC IN CONSTRUCTION AREA 1, EXCEPT THAT INLET PROTECTION GIP 02-2 SHALL BE INSTALLED IMMEDIATELY AFTER INLET I-1 IS INSTALLED, AND PST 02-1 SHALL BE INSTALLED PRIOR TO THE CONTRUCTION OF THE BIO-SWALE.
2. PERFORM PROPOSED CONSTRUCTION AS SHOWN ON THE PLANS ~~EXCEPT FOR THE CROSS HATCHED AREA ON ES-02.~~
3. PRIOR TO CONSTRUCTING BSW 1-1, PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO FACILITY. CONSTRUCT AND PERMANENTLY STABILIZE BSW 1-1. ~~WITH THE APPROVAL OF QAD, REMOVE PST 02-1, COMPLETE THE REMAINING BSW 1-1 CONSTRUCTION, AND PERMANENTLY STABILIZE THOSE AREAS.~~
4. ~~DURING A 3-DAY NOAA DRY WEATHER FORECAST, WITH THE APPROVAL OF THE QAD, REMOVE GIP 02-~~1. ~~PERFORM PROPOSED CONSTRUCTION AS SHOWN IN THE CROSS HATCHED AREAS ON ES-02.~~
5. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

CONSTRUCTION AREA 2 (SEE ES-02 AND ES-03)

1. INSTALL ALL SSF IN CONSTRUCTION AREA 2.
2. PERFORM PROPOSED CONSTRUCTION AS SHOWN ON THE PLANS. ANY DISTURBANCE WITHIN THE HATCHED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY.
3. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

We show same day stabilization pattern on plans; there's no reason these areas need to be constructed last

We specify removal of all ESC measures in step 5 so calling out GIP 02-1 and PST 02-1 is not necessary

ARE THERE ANY STEPS THAT WOULD WORK BETTER AS PLAN NOTE?

SEQUENCE OF CONSTRUCTION
EROSION AND SEDIMENT CONTROL

NOTES

1. ONLY MINOR CLEARING AND GRUBBING SHALL OCCUR FOR THE INSTALLATION OF THE EROSION AND SEDIMENT CONTROL (ESC) MEASURES, AND ALL ESC MEASURES AND DEVICES SHALL BE IN PLACE AND FUNCTIONING PROPERLY FOR EACH CONSTRUCTION PHASE PRIOR TO MASS CLEARING AND GRUBBING OF THE WORKING AREA FOR THAT PHASE AND COMMENCING ANY CONSTRUCTION ACTIVITIES.
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9. IN AREAS WHERE HIGHLY EROSIVE SOILS EXIST, STABILIZE WITH SSM IMMEDIATELY UPON COMPLETING GRADING.
10. PERFORM GRADING AS SHOWN IN THE HATCHED AREAS USING "SAME DAY STABILIZATION" METHOD. SSF WITHIN GRADING LIMIT SHALL BE ADJUSTED AS NEEDED DURING CONSTRUCTION. ALL DISTURBED AREA WITHIN HATCHED AREAS SHALL BE STABILIZED VIA. FINAL PLANTING METHODS AT THE END OF EACH WORK DAY.

NOTES:

1. PST 02-1 SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF THE BIOSWALE.
2. GIP 02-2 SHALL BE INSTALLED IMMEDIATELY AFTER THE INSTALLATION OF INLET 1-1.

SEQUENCE OF CONSTRUCTION

1. THE CONTRACTOR SHALL NOTIFY SHA'S QUALITY ASSURANCE DIVISION PER GENERAL NOTE 2
2. STAKEOUT LOD AND INSTALL TOCF. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMITS OF TOCF.

CONSTRUCTION AREA 1 (SEE ES-02 AND ES-03)

1. INSTALL ESC IN CONSTRUCTION AREA 1, ~~EXCEPT THAT INLET PROTECTION GIP 02-2 SHALL BE INSTALLED IMMEDIATELY AFTER INLET 1-1 IS INSTALLED, AND PST 02-1 SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF THE BIO-SWALE~~.
2. PERFORM PROPOSED CONSTRUCTION AS SHOWN ON THE PLANS.
3. PRIOR TO CONSTRUCTING BSW 1-1, PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO FACILITY. WITH QAD APPROVAL, CONSTRUCT AND PERMANENTLY STABILIZE BSW 1-1.
4. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

Already specified in plan note

CONSTRUCTION AREA 2 (SEE ES-02 AND ES-03)

1. INSTALL ALL SSF IN CONSTRUCTION AREA 2.
2. PERFORM PROPOSED CONSTRUCTION AS SHOWN ON THE PLANS. ANY DISTURBANCE WITHIN THE HATCHED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY.
3. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

ANY OTHER ITEMS THAT CAN BE REMOVED?

SEQUENCE OF CONSTRUCTION
EROSION AND SEDIMENT CONTROL

Change to "necessary" since "minor" is a vague term

NOTES

1. ONLY ~~MINOR~~ CLEARING AND GRUBBING SHALL OCCUR FOR THE INSTALLATION OF THE EROSION AND SEDIMENT CONTROL (ESC) MEASURES, AND ALL ESC MEASURES AND DEVICES SHALL BE IN PLACE AND FUNCTIONING PROPERLY FOR EACH CONSTRUCTION PHASE PRIOR TO MASS CLEARING AND GRUBBING OF THE WORKING AREA FOR THAT PHASE AND COMMENCING ANY CONSTRUCTION ACTIVITIES.
2. MAINTAIN ALL SEDIMENT CONTROL PRACTICES ACCORDING TO THE MARYLAND 2011 STANDARDS UNTIL THE ENTIRE SITE IS STABILIZED.
3. CLEAR AND GRUB AND PROCEED TO CONSTRUCTION ACCORDING TO THE SEQUENCE SPECIFIED ON THE MAINTENANCE OF TRAFFIC (MOT) PLANS.
4. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL USE PORTABLE SEDIMENT TANKS OR SUMP PITS TO DEWATER AREAS OF TRAPPED SEDIMENT LADEN WATER DURING CONSTRUCTION. ALL DEWATERING SHALL BE DISCHARGED TO A STABLE OUTFALL APPROVED BY THE SHE QUALITY ASSURANCE DIVISION (QAD).
5. UTILITIES AND STORM DRAINS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS ARE FOR THE GUIDANCE OF THE CONTRACTOR ONLY. ALL UTILITIES SHALL BE CONSTRUCTED AS SHOWN ON THE ROADWAY PLANS.
6. CONTRACTOR SHALL LOCATE THE STAGING AND STOCKPILING AREAS UPON SHA QAD'S APPROVAL. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY ADDITIONAL EROSION AND SEDIMENT CONTROLS FOR STAGING AND STOCKPILE AREAS AS REQUIRED BY THE SHA QAD.
7. WHERE TREE ROOT PRUNING IS SPECIFIED (SEE LANDSCAPE PLANS), PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS.
8. WORK IN EACH CONSTRUCTION AREA MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIES CONTROLS MUST BE INSTALLED.
9. IN AREAS WHERE HIGHLY ERODIBLE SOILS EXIST, STABILIZE WITH SSM IMMEDIATELY UPON COMPLETING GRADING.
10. PERFORM GRADING AS SHOWN IN THE HATCHED AREAS USING "SAME DAY STABILIZATION" METHOD. SSF WITHIN GRADING LIMIT SHALL BE ADJUSTED AS NEEDED DURING CONSTRUCTION. ALL DISTURBED AREA WITHIN HATCHED AREAS SHALL BE STABILIZED VIA. FINAL PLANTING METHODS AT THE END OF EACH WORK DAY.

SEQUENCE OF CONSTRUCTION

1. THE CONTRACTOR SHALL NOTIFY SHA'S QUALITY ASSURANCE DIVISION PER GENERAL NOTE 2
2. STAKEOUT LOD AND INSTALL TOCF. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMITS OF TOCF.

CONSTRUCTION AREA 1 (SEE ES-02 AND ES-03)

1. INSTALL ESC IN CONTRUCTION AREA 1
2. PERFORM PROPOSED CONSTRUCTION AS SHOWN ~~ON THE PLANS.~~
3. PRIOR TO CONSTRUCTING BSW 1-1, PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO FACILITY. WITH QAD APPROVAL, CONSTRUCT AND PERMANENTLY STABILIZE BSW 1-1.
4. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

Change to "as specified in contract documents"

CONSTRUCTION AREA 2 (SEE ES-02 AND ES-03)

1. INSTALL ALL SSF IN CONSTRUCTION AREA 2.
2. PERFORM PROPOSED CONSTRUCTION AS SHOWN ON THE PLANS. ANY DISTURBANCE WITHIN THE HATCHED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY.
3. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

WE END UP WITH...

SEQUENCE OF CONSTRUCTION
EROSION AND SEDIMENT CONTROL

NOTES

1. ONLY NECESSARY CLEARING AND GRUBBING SHALL OCCUR FOR THE INSTALLATION OF THE EROSION AND SEDIMENT CONTROL (ESC) MEASURES, AND ALL ESC MEASURES AND DEVICES SHALL BE IN PLACE AND FUNCTIONING PROPERLY FOR EACH CONSTRUCTION PHASE PRIOR TO MASS CLEARING AND GRUBBING OF THE WORKING AREA FOR THAT PHASE AND COMMENCING ANY CONSTRUCTION ACTIVITIES.
2. MAINTAIN ALL SEDIMENT CONTROL PRACTICES ACCORDING TO THE MARYLAND 2011 STANDARDS UNTIL THE ENTIRE SITE IS STABILIZED.
3. CLEAR AND GRUB AND PROCEED TO CONSTRUCTION ACCORDING TO THE SEQUENCE SPECIFIED ON THE MAINTENANCE OF TRAFFIC (MOT) PLANS.
4. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL USE PORTABLE SEDIMENT TANKS OR SUMP PITS TO DEWATER AREAS OF TRAPPED SEDIMENT LADEN WATER DURING CONSTRUCTION. ALL DEWATERING SHALL BE DISCHARGED TO A STABLE OUTFALL APPROVED BY THE SHE QUALITY ASSURANCE DIVISION (QAD).
5. UTILITIES AND STORM DRAINS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS ARE FOR THE GUIDANCE OF THE CONTRACTOR ONLY. ALL UTILITIES SHALL BE CONSTRUCTED AS SHOWN ON THE ROADWAY PLANS.
6. CONTRACTOR SHALL LOCATE THE STAGING AND STOCKPILING AREAS UPON SHA QAD'S APPROVAL. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY ADDITIONAL EROSION AND SEDIMENT CONTROLS FOR STAGING AND STOCKPILE AREAS AS REQUIRED BY THE SHA QAD.
7. WHERE TREE ROOT PRUNING IS SPECIFIED (SEE LANDSCAPE PLANS), PERFORM TREE ROOT PRUNING CONCURRENTLY WITH INSTALLATION OF CONTROLS.
8. WORK IN EACH CONSTRUCTION AREA MAY BE PERFORMED CONCURRENTLY AND IN ANY ORDER. POSITIVE SURFACE RUNOFF AND STORM DRAIN FLOWS MUST BE MAINTAINED, AND THE SPECIFIES CONTROLS MUST BE INSTALLED.
9. IN AREAS WHERE HIGHLY ERODIBLE SOILS EXIST, STABILIZE WITH SSM IMMEDIATELY UPON COMPLETING GRADING.
10. PERFORM GRADING AS SHOWN IN THE HATCHED AREAS USING "SAME DAY STABILIZATION" METHOD. SSF WITHIN GRADING LIMIT SHALL BE ADJUSTED AS NEEDED DURING CONSTRUCTION. ALL DISTURBED AREA WITHIN HATCHED AREAS SHALL BE STABILIZED VIA. FINAL PLANTING METHODS AT THE END OF EACH WORK DAY.

SEQUENCE OF CONSTRUCTION

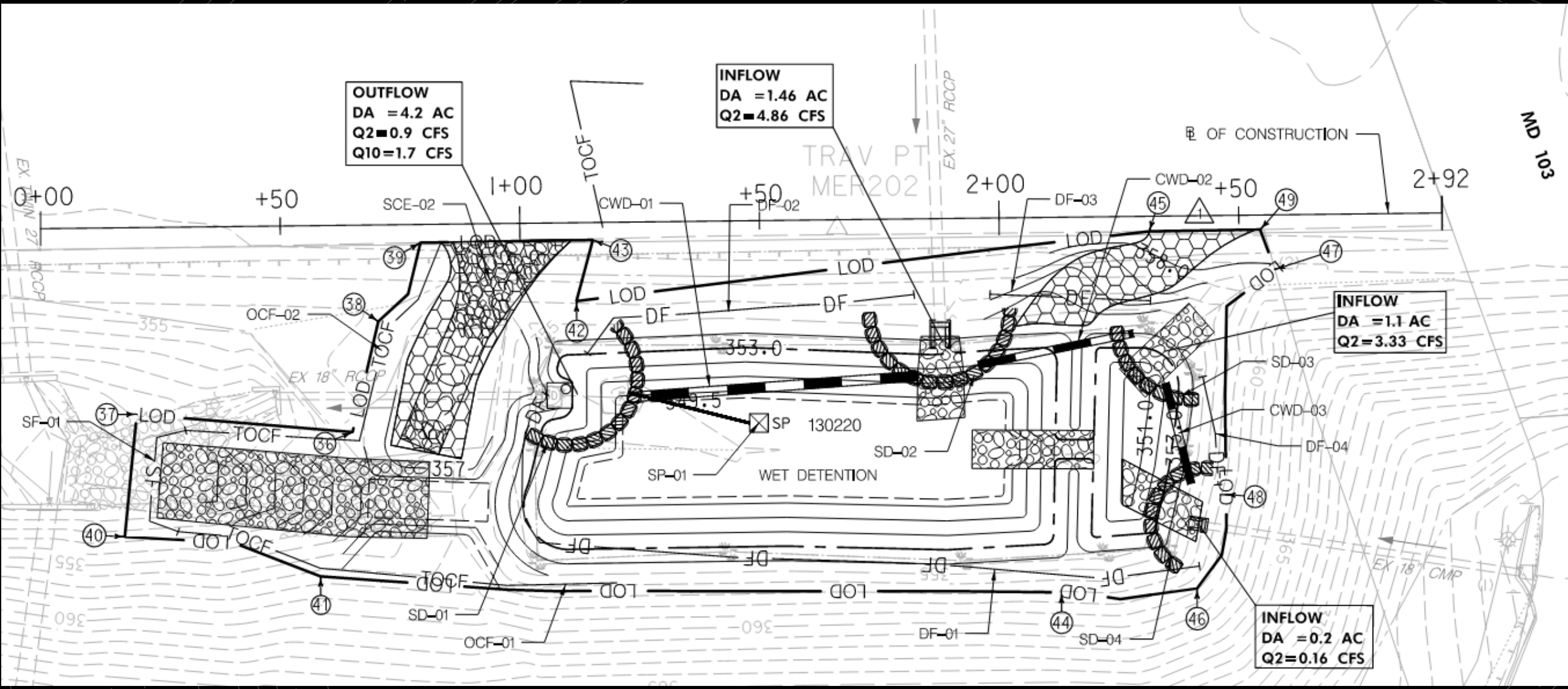
1. THE CONTRACTOR SHALL NOTIFY SHA'S QUALITY ASSURANCE DIVISION PER GENERAL NOTE 2
2. STAKEOUT LOD AND INSTALL TOCF. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMITS OF TOCF.

CONSTRUCTION AREA 1 (SEE ES-02 AND ES-03)

1. INSTALL ESC IN CONSTRUCTION AREA 1
2. PERFORM PROPOSED CONSTRUCTION AS SPECIFIED IN CONSTRUCTION DOCUMENTS.
3. PRIOR TO CONSTRUCTING BSW 1-1, PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO FACILITY. WITH QAD APPROVAL, CONSTRUCT AND PERMANENTLY STABILIZE BSW 1-1.
4. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

CONSTRUCTION AREA 2 (SEE ES-02 AND ES-03)

1. INSTALL ALL SSF IN CONSTRUCTION AREA 2.
2. PERFORM PROPOSED CONSTRUCTION AS SPECIFIED IN CONSTRUCTION DOCUMENTS. ANY DISTURBANCE WITHIN THE HATCHED AREA SHALL BE STABILIZED AT THE END OF EACH WORK DAY.
3. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.



Example Project – BMP Retrofit

ORIGINAL SEQUENCE: ASSUME THIS IS NOT AN MD CODE 378 EMBANKMENT

SEQUENCE OF CONSTRUCTION:

1. CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS FROM THE STATE HIGHWAY ADMINISTRATION PRIOR TO MOBILIZATION.
2. NOTIFY THE REGIONAL ENVIRONMENTAL COORDINATOR (REC), INSPECTION AND COMPLIANCE PROGRAM, (410) 365–1064 AT LEAST SEVEN (7) DAYS PRIOR TO ANY LAND DISTURBANCE ACTIVITY AND HOLD A PRE–CONSTRUCTION MEETING WITH BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF PRD.
3. AT LEAST SEVENTY TWO (72) HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SUBMIT TO THE SHA REC INSPECTORS A WRITTEN NOTIFICATION STATING:

–WHEN THE CONTRACTOR INTENDS TO BEGIN CONSTRUCTION
–THE SOURCE OF BORROW MATERIAL
–THE DISPOSAL AREA OF EXCESS MATERIAL
–THE CONTRACTOR'S TENTATIVE CLOSING DATE

4. REMOVE EXISTING TRAFFIC BARRIER AT LOCATION SHOWN ON CONSTRUCTION PLAN.
5. CLEAR AND GRUB ALL AREAS WITHIN THE LOD NEEDED FOR SWM FACILITY, CONSTRUCTION ACCESS POINT CONTROLS AND ASSOCIATED EROSION AND SEDIMENT CONTROL DEVICES.
6. UPON COMPLETION OF LOD STAKEOUT, LOD LOCATIONS SHALL REVIEWED IN THE FIELD WITH THE ENGINEER AND REPRESENTATIVES PRIOR TO INSTALLATION OF ORANGE CONSTRUCTION FENCE.
7. PLACE ORANGE CONSTRUCTION FENCE ALONG ENTIRE LOD, EXCEPT AT THE CONSTRUCTION ENTRANCES, WATERS OF THE US AND AT LOCATIONS WHERE OTHER FENCES ARE INSTALLED.
8. INSTALL STABILIZED CONSTRUCTION ENTRANCE SCE–02, SAND BAG DAMS SD–01 TO SD–04, CLEAR WATER DIVERSION PIPES CWD–01 TO CWD–03, DIVERSION FENCES DF–01 TO DF–04, SUMP PIT SP–01 AND OTHER EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN EROSION AND SEDIMENT CONTROL PLAN SHEET.
9. ENSURE THE POND IS DRY PRIOR TO START OF ANY EXCAVATION. CONTRACTOR SHALL USE GRAVITY FLOW TO DEWATER THE EXISTING POND.
10. START POND EXCAVATION. INSTALL SOIL STABILIZATION MATTING ON ALL GRADED AREAS AS SHOWN ON THE CONSTRUCTION PLANS.
11. CONSTRUCT FOREBAY WITH OVERFLOW WEIR AS SHOWN ON THE PLAN.
12. REPLACE EXISTING END SECTION, INFLOW DITCHES AND ALL PROPOSED RIPRAPS AS SHOWN ON THE CONSTRUCTION PLAN.
13. REMOVE A PORTION OF EXISTING PRINCIPAL SPILLWAY AND OLD RISER STRUCTURE.
14. INSTALL NEW RISER STRUCTURE WITH PROPOSED ORIFICE, WEIR AND TRASH RACKS.
15. SOIL STABILIZATION MATTING SHALL BE INSTALLED ON ALL EXPOSED SLOPED AREAS AS INDICATED ON THE CONSTRUCTION PLAN. STABILIZE ALL DISTURBED AREA AT THE END OF EACH WORK DAY.
16. USE SUMP PIT AS REQUIRED DURING THE CONSTRUCTION OF POND TO CLEAN SEDIMENT LADEN WATER BEFORE DISCHARGING TO THE DOWNSTREAM.
17. CONTRACTOR SHALL USE GRAVITY FLOW TO DIVERT CLEAN WATER FROM ALL INFLOW DITCHES USING CLEAR WATER DIVERSION PIPES.
18. PERFORM LANDSCAPING ACTIVITIES FOR POND.
19. INSTALL ALL ROADWAY SAFETY FEATURES AND MAINTENANCE ACCESS ROAD AS REQUIRED AND AS SHOWN ON THE CONSTRUCTION PLANS. AFTER ALL COMPLETION OF ALL CONSTRUCTION ACTIVITIES, STABILIZE ALL DISTURBED AREAS TO ITS FINAL GRADING AND REMOVE SEDIMENT CONTROL DEVICES WITH THE PERMISSION OF SHA REC INSPECTOR.

MOT SEQUENCE OF CONSTRUCTION:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY, INSTALL, & MAINTAIN ALL TEMPORARY TRAFFIC CONTROL EQUIPMENT FOR THE DURATION OF THE CONTRACT. ALL MAINTENANCE OF TRAFFIC DEVICES AND INSTALLATION OF THE DEVICES WILL BE INSPECTED ON A ROUTINE BASIS BY THE CONTRACTOR'S MAINTENANCE OF TRAFFIC MANAGER. THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES PROMPTLY.
2. ALL TRAFFIC CONTROL DEVICES, SHOULDER CLOSURES, AND LANE CLOSURES MUST ADHERE TO THE CURRENT EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD M.U.T.C.D.) AND SHA BOOK OF STANDARDS.
3. ALL SHOULDER CLOSURES SHALL BE DONE ACCORDING TO MDOT SHA's STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
4. THE CONTRACTOR SHALL CLOSE THE SHOULDER WITH A PHYSICAL BARRIER IF THE CONSTRUCTION OPERATION OCCURS WITHIN 10' FROM THE EDGE OF TRAVEL LANE.
5. NO LANE CLOSURES OR DISRUPTION OF TRAFFIC SHALL BE ALLOWED BETWEEN THE HOURS OF 5AM–9AM & 4PM–7PM WEEKDAYS. REFER TO THE CONTRACT SPECIAL PROVISIONS FOR ADDITIONAL CONSTRUCTION AND LANE CLOSURE RESTRICTIONS.
6. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE EXISTING MD 100 TRAVEL LANES.
7. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING SIDEWALKS AT ALL TIMES IN COMPLIANCE WITH CURRENT ADA STANDARDS.
8. A 48"X48" TRUCK CROSSING W11–10(1) WORK AREA SIGN SHALL BE INSTALLED IN ADVANCE OF STABILIZED CONSTRUCTION ENTRANCE ALONG MD 100 EB. AS DIRECTED BY THE ENGIEER, A 48"X48" W20–7a FLAGGER SIGN IN COMBINATION WITH THE 30"X24" W16–2P SHALL ALSO BE USED 500' IN ADVANCE OF THE CONSTRUCTION ENTRANCE. THE SIGNS SHALL BE INSTALLED ON PERMANENT SIGN SUPPORTS, NOT BLOCKING THE VIEWS OF EXISTING SIGNS, BE VISIBLE THROUGHOUT THE CONSTRUCTION DURATION AND SHALL BE REMOVED AFTER THE COMPLETION OF CONSTRUCTION.

ARE ANY STEPS THAT ARE NOT RELEVANT TO EROSION AND SEDIMENT CONTROL?

SEQUENCE OF CONSTRUCTION:

1. CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS FROM THE STATE HIGHWAY ADMINISTRATION PRIOR TO MOBILIZATION.
2. NOTIFY THE REGIONAL ENVIRONMENTAL COORDINATOR (REC), INSPECTION AND COMPLIANCE PROGRAM, (410) 365–1064 AT LEAST SEVEN (7) DAYS PRIOR TO ANY LAND DISTURBANCE ACTIVITY AND HOLD A PRE–CONSTRUCTION MEETING WITH BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF PRD.
3. AT LEAST SEVENTY TWO (72) HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SUBMIT TO THE SHA REC INSPECTORS A WRITTEN NOTIFICATION STATING:

–WHEN THE CONTRACTOR INTENDS TO BEGIN CONSTRUCTION
–THE SOURCE OF BORROW MATERIAL
–THE DISPOSAL AREA OF EXCESS MATERIAL
–THE CONTRACTOR'S TENTATIVE CLOSING DATE

4. REMOVE EXISTING TRAFFIC BARRIER AT LOCATION SHOWN ON CONSTRUCTION PLAN.
5. CLEAR AND GRUB ALL AREAS WITHIN THE LOD NEEDED FOR SWM FACILITY, CONSTRUCTION ACCESS POINT CONTROLS AND ASSOCIATED EROSION AND SEDIMENT CONTROL DEVICES.
6. UPON COMPLETION OF LOD STAKEOUT, LOD LOCATIONS SHALL REVIEWED IN THE FIELD WITH THE ENGINEER AND REPRESENTATIVES PRIOR TO INSTALLATION OF ORANGE CONSTRUCTION FENCE.
7. PLACE ORANGE CONSTRUCTION FENCE ALONG ENTIRE LOD, EXCEPT AT THE CONSTRUCTION ENTRANCES, WATERS OF THE US AND AT LOCATIONS WHERE OTHER FENCES ARE INSTALLED.
8. INSTALL STABILIZED CONSTRUCTION ENTRANCE SCE–02, SAND BAG DAMS SD–01 TO SD–04, CLEAR WATER DIVERSION PIPES CWD–01 TO CWD–03, DIVERSION FENCES DF–01 TO DF–04, SUMP PIT SP–01 AND OTHER EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN EROSION AND SEDIMENT CONTROL PLAN SHEET.
9. ENSURE THE POND IS DRY PRIOR TO START OF ANY EXCAVATION. CONTRACTOR SHALL USE GRAVITY FLOW TO DEWATER THE EXISTING POND.
10. START POND EXCAVATION. INSTALL SOIL STABILIZATION MATTING ON ALL GRADED AREAS AS SHOWN ON THE CONSTRUCTION PLANS.
11. CONSTRUCT FOREBAY WITH OVERFLOW WEIR AS SHOWN ON THE PLAN.
12. REPLACE EXISTING END SECTION, INFLOW DITCHES AND ALL PROPOSED RIPRAPS AS SHOWN ON THE CONSTRUCTION PLAN.
13. REMOVE A PORTION OF EXISTING PRINCIPAL SPILLWAY AND OLD RISER STRUCTURE.
14. INSTALL NEW RISER STRUCTURE WITH PROPOSED ORIFICE, WEIR AND TRASH RACKS.
15. SOIL STABILIZATION MATTING SHALL BE INSTALLED ON ALL EXPOSED SLOPED AREAS AS INDICATED ON THE CONSTRUCTION PLAN. STABILIZE ALL DISTURBED AREA AT THE END OF EACH WORK DAY.
16. USE SUMP PIT AS REQUIRED DURING THE CONSTRUCTION OF POND TO CLEAN SEDIMENT LADEN WATER BEFORE DISCHARGING TO THE DOWNSTREAM.
17. CONTRACTOR SHALL USE GRAVITY FLOW TO DIVERT CLEAN WATER FROM ALL INFLOW DITCHES USING CLEAR WATER DIVERSION PIPES.
18. PERFORM LANDSCAPING ACTIVITIES FOR POND.
19. INSTALL ALL ROADWAY SAFETY FEATURES AND MAINTENANCE ACCESS ROAD AS REQUIRED AND AS SHOWN ON THE CONSTRUCTION PLANS. AFTER ALL COMPLETION OF ALL CONSTRUCTION ACTIVITIES, STABILIZE ALL DISTURBED AREAS TO ITS FINAL GRADING AND REMOVE SEDIMENT CONTROL DEVICES WITH THE PERMISSION OF SHA REC INSPECTOR.

NOTE 1: OTHER PERMITS PART OF CONTRACT SPECIFICATIONS. NOT RELATED TO ESC

NOTE 4. TRAFFIC BARRIERS NOT RELATED TO ESC

NOTE 19: ROADWAY ITEMS NOT RELATED TO ESC. PART OF NOTE IS NOT APPLICABLE

MOT SEQUENCE OF CONSTRUCTION:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY, INSTALL, & MAINTAIN ALL TEMPORARY TRAFFIC CONTROL EQUIPMENT FOR THE DURATION OF THE CONTRACT. ALL MAINTENANCE OF TRAFFIC DEVICES AND INSTALLATION OF THE DEVICES WILL BE INSPECTED ON A ROUTINE BASIS BY THE CONTRACTOR'S MAINTENANCE OF TRAFFIC MANAGER. THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES PROMPTLY.
2. ALL TRAFFIC CONTROL DEVICES, SHOULDER CLOSURES, AND LANE CLOSURES MUST ADHERE TO THE CURRENT EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD M.U.T.C.D.) AND SHA BOOK OF STANDARDS.
3. ALL SHOULDER CLOSURES SHALL BE DONE ACCORDING TO MDOT SHA's STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
4. THE CONTRACTOR SHALL CLOSE THE SHOULDER WITH A PHYSICAL BARRIER IF THE CONSTRUCTION OPERATION OCCURS WITHIN 10' FROM THE EDGE OF TRAVEL LANE.
5. NO LANE CLOSURES OR DISRUPTION OF TRAFFIC SHALL BE ALLOWED BETWEEN THE HOURS OF 5AM–9AM & 4PM–7PM WEEKDAYS. REFER TO THE CONTRACT SPECIAL PROVISIONS FOR ADDITIONAL CONSTRUCTION AND LANE CLOSURE RESTRICTIONS.
6. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE EXISTING MD 100 TRAVEL LANES.
7. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING SIDEWALKS AT ALL TIMES IN COMPLIANCE WITH CURRENT ADA STANDARDS.
8. A 48"X48" TRUCK CROSSING W11–10(1) WORK AREA SIGN SHALL BE INSTALLED IN ADVANCE OF STABILIZED CONSTRUCTION ENTRANCE ALONG MD 100 EB. AS DIRECTED BY THE ENGIEER, A 48"X48" W20–7a FLAGGER SIGN IN COMBINATION WITH THE 30"X24" W16–2P SHALL ALSO BE USED 500' IN ADVANCE OF THE CONSTRUCTION ENTRANCE. THE SIGNS SHALL BE INSTALLED ON PERMANENT SIGN SUPPORTS, NOT BLOCKING THE VIEWS OF EXISTING SIGNS, BE VISIBLE THROUGHOUT THE CONSTRUCTION DURATION AND SHALL BE REMOVED AFTER THE COMPLETION OF CONSTRUCTION.

MOT sequence of construction should not be referenced on ESC plans

ARE ANY STEPS REDUNDANT WITH GENERAL NOTES/WOULD WORK BETTER AS A GENERAL NOTE?

SEQUENCE OF CONSTRUCTION:

1. ~~CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS FROM THE STATE HIGHWAY ADMINISTRATION PRIOR TO MOBILIZATION.~~
2. NOTIFY THE REGIONAL ENVIRONMENTAL COORDINATOR (REC), INSPECTION AND COMPLIANCE PROGRAM, (410) 365–1064 AT LEAST SEVEN (7) DAYS PRIOR TO ANY LAND DISTURBANCE ACTIVITY AND HOLD A PRE–CONSTRUCTION MEETING WITH BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF PRD.
3. AT LEAST SEVENTY TWO (72) HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SUBMIT TO THE SHA REC INSPECTORS A WRITTEN NOTIFICATION STATING:
   –WHEN THE CONTRACTOR INTENDS TO BEGIN CONSTRUCTION
   –THE SOURCE OF BORROW MATERIAL
   –THE DISPOSAL AREA OF EXCESS MATERIAL
   –THE CONTRACTOR'S TENTATIVE CLOSING DATE
4. ~~REMOVE EXISTING TRAFFIC BARRIER AT LOCATION SHOWN ON CONSTRUCTION PLAN.~~
5. CLEAR AND GRUB ALL AREAS WITHIN THE LOD NEEDED FOR SWM FACILITY, CONSTRUCTION ACCESS POINT CONTROLS AND ASSOCIATED EROSION AND SEDIMENT CONTROL DEVICES.
6. ~~UPON COMPLETION OF LOD STAKEOUT, LOD LOCATIONS SHALL REVIEWED IN THE FIELD WITH THE ENGINEER AND REPRESENTATIVES PRIOR TO INSTALLATION OF ORANGE CONSTRUCTION FENCE.~~
7. ~~PLACE ORANGE CONSTRUCTION FENCE ALONG ENTIRE LOD, EXCEPT AT THE CONSTRUCTION ENTRANCES, WATERS OF THE US AND AT LOCATIONS WHERE OTHER FENCES ARE INSTALLED.~~
8. INSTALL STABILIZED CONSTRUCTION ENTRANCE SCE–02, SAND BAG DAMS SD–01 TO SD–04, CLEAR WATER DIVERSION PIPES CWD–01 TO CWD–03, DIVERSION FENCES DF–01 TO DF–04, SUMP PIT SP–01 AND OTHER EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN EROSION AND SEDIMENT CONTROL PLAN SHEET.
9. ENSURE THE POND IS DRY PRIOR TO START OF ANY EXCAVATION. CONTRACTOR SHALL USE GRAVITY FLOW TO DEWATER THE EXISTING POND.
10. START POND EXCAVATION. INSTALL SOIL STABILIZATION MATTING ON ALL GRADED AREAS AS SHOWN ON THE CONSTRUCTION PLANS.
11. CONSTRUCT FOREBAY WITH OVERFLOW WEIR AS SHOWN ON THE PLAN.
12. REPLACE EXISTING END SECTION, INFLOW DITCHES AND ALL PROPOSED RIPRAPS AS SHOWN ON THE CONSTRUCTION PLAN.
13. REMOVE A PORTION OF EXISTING PRINCIPAL SPILLWAY AND OLD RISER STRUCTURE.
14. INSTALL NEW RISER STRUCTURE WITH PROPOSED ORIFICE, WEIR AND TRASH RACKS.
15. SOIL STABILIZATION MATTING SHALL BE INSTALLED ON ALL EXPOSED SLOPED AREAS AS INDICATED ON THE CONSTRUCTION PLAN. STABILIZE ALL DISTURBED AREA AT THE END OF EACH WORK DAY.
16. USE SUMP PIT AS REQUIRED DURING THE CONSTRUCTION OF POND TO CLEAN SEDIMENT LADEN WATER BEFORE DISCHARGING TO THE DOWNSTREAM.
17. CONTRACTOR SHALL USE GRAVITY FLOW TO DIVERT CLEAN WATER FROM ALL INFLOW DITCHES USING CLEAR WATER DIVERSION PIPES.
18. PERFORM LANDSCAPING ACTIVITIES FOR POND.
19. ~~INSTALL ALL ROADWAY SAFETY FEATURES AND MAINTENANCE ACCESS ROAD AS REQUIRED AND AS SHOWN ON THE CONSTRUCTION PLANS.~~ AFTER ALL COMPLETION OF ALL CONSTRUCTION ACTIVITIES, STABILIZE ALL DISTURBED AREAS TO ITS FINAL GRADING AND REMOVE SEDIMENT CONTROL DEVICES WITH THE PERMISSION OF SHA REC INSPECTOR.

REVISE TO:
NOTIFY QAD PER ESN-01 NOTE 2.
STAKEOUT LOD AND INSTALL TOCF.

MOT SEQUENCE OF CONSTRUCTION:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY, INSTALL, & MAINTAIN ALL TEMPORARY TRAFFIC CONTROL EQUIPMENT FOR THE DURATION OF THE CONTRACT. ALL MAINTENANCE OF TRAFFIC DEVICES AND INSTALLATION OF THE DEVICES WILL BE INSPECTED ON A ROUTINE BASIS BY THE CONTRACTOR'S MAINTENANCE OF TRAFFIC MANAGER. THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES PROMPTLY.
2. ALL TRAFFIC CONTROL DEVICES, SHOULDER CLOSURES, AND LANE CLOSURES MUST ADHERE TO THE CURRENT EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD M.U.T.C.D.) AND SHA BOOK OF STANDARDS.
3. ALL SHOULDER CLOSURES SHALL BE DONE ACCORDING TO MDOT SHA's STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
4. THE CONTRACTOR SHALL CLOSE THE SHOULDER WITH A PHYSICAL BARRIER IF THE CONSTRUCTION OPERATION OCCURS WITHIN 10' FROM THE EDGE OF TRAVEL LANE.
5. NO LANE CLOSURES OR DISRUPTION OF TRAFFIC SHALL BE ALLOWED BETWEEN THE HOURS OF 5AM–9AM & 4PM–7PM WEEKDAYS. REFER TO THE CONTRACT SPECIAL PROVISIONS FOR ADDITIONAL CONSTRUCTION AND LANE CLOSURE RESTRICTIONS.
6. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE EXISTING MD 100 TRAVEL LANES.
7. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING SIDEWALKS AT ALL TIMES IN COMPLIANCE WITH CURRENT ADA STANDARDS.
8. A 48"X48" TRUCK CROSSING W11–10(1) WORK AREA SIGN SHALL BE INSTALLED IN ADVANCE OF STABILIZED CONSTRUCTION ENTRANCE ALONG MD 100 EB. AS DIRECTED BY THE ENGINEER, A 48"X48" W20–7a FLAGGER SIGN IN COMBINATION WITH THE 30"X24" W16–2P SHALL ALSO BE USED 500' IN ADVANCE OF THE CONSTRUCTION ENTRANCE. THE SIGNS SHALL BE INSTALLED ON PERMANENT SIGN SUPPORTS, NOT BLOCKING THE VIEWS OF EXISTING SIGNS, BE VISIBLE THROUGHOUT THE CONSTRUCTION DURATION AND SHALL BE REMOVED AFTER THE COMPLETION OF CONSTRUCTION.

CAN ANY STEPS BE FURTHER REVISED FOR FLEXIBLE SEQUENCE?

SEQUENCE OF CONSTRUCTION:

1. CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS FROM THE STATE HIGHWAY ADMINISTRATION PRIOR TO MOBILIZATION.
2. NOTIFY THE REGIONAL ENVIRONMENTAL COORDINATOR (REC), INSPECTION AND COMPLIANCE PROGRAM, (410) 365–1064 AT LEAST SEVEN (7) DAYS PRIOR TO ANY LAND DISTURBANCE ACTIVITY AND HOLD A PRE–CONSTRUCTION MEETING WITH BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF PRD.
3. AT LEAST SEVENTY TWO (72) HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SUBMIT TO THE SHA REC INSPECTORS A WRITTEN NOTIFICATION STATING:
   –WHEN THE CONTRACTOR INTENDS TO BEGIN CONSTRUCTION
   –THE SOURCE OF BORROW MATERIAL
   –THE DISPOSAL AREA OF EXCESS MATERIAL
   –THE CONTRACTOR'S TENTATIVE CLOSING DATE
4. REMOVE EXISTING TRAFFIC BARRIER AT LOCATION SHOWN ON CONSTRUCTION PLAN.
5. CLEAR AND GRUB ALL AREAS WITHIN THE LOD NEEDED FOR SWM FACILITY, CONSTRUCTION ACCESS POINT CONTROLS AND ASSOCIATED EROSION AND SEDIMENT CONTROL DEVICES.
6. UPON COMPLETION OF LOD STAKEOUT, LOD LOCATIONS SHALL REVIEWED IN THE FIELD WITH THE ENGINEER AND REPRESENTATIVES PRIOR TO INSTALLATION OF ORANGE CONSTRUCTION FENCE.
7. PLACE ORANGE CONSTRUCTION FENCE ALONG ENTIRE LOD, EXCEPT AT THE CONSTRUCTION ENTRANCES, WATERS OF THE US AND AT LOCATIONS WHERE OTHER FENCES ARE INSTALLED.
8. INSTALL STABILIZED CONSTRUCTION ENTRANCE SCE–02, SAND BAG DAMS SD–01 TO SD–04, CLEAR WATER DIVERSION PIPES CWD–01 TO CWD–03, DIVERSION FENCES DF–01 TO DF–04, SUMP PIT SP–01 AND OTHER EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN EROSION AND SEDIMENT CONTROL PLAN SHEET.
9. ENSURE THE POND IS DRY PRIOR TO START OF ANY EXCAVATION. CONTRACTOR SHALL USE GRAVITY FLOW TO DEWATER THE EXISTING POND.
10. START POND EXCAVATION. INSTALL SOIL STABILIZATION MATTING ON ALL GRADED AREAS AS SHOWN ON THE CONSTRUCTION PLANS.
11. CONSTRUCT FOREBAY WITH OVERFLOW WEIR AS SHOWN ON THE PLAN.
12. REPLACE EXISTING END SECTION, INFLOW DITCHES AND ALL PROPOSED RIPRAPS AS SHOWN ON THE CONSTRUCTION PLAN.
13. REMOVE A PORTION OF EXISTING PRINCIPAL SPILLWAY AND OLD RISER STRUCTURE.
14. INSTALL NEW RISER STRUCTURE WITH PROPOSED ORIFICE, WEIR AND TRASH RACKS.
15. SOIL STABILIZATION MATTING SHALL BE INSTALLED ON ALL EXPOSED SLOPED AREAS AS INDICATED ON THE CONSTRUCTION PLAN. STABILIZE ALL DISTURBED AREA AT THE END OF EACH WORK DAY.
16. USE SUMP PIT AS REQUIRED DURING THE CONSTRUCTION OF POND TO CLEAN SEDIMENT LADEN WATER BEFORE DISCHARGING TO THE DOWNSTREAM.
17. CONTRACTOR SHALL USE GRAVITY FLOW TO DIVERT CLEAN WATER FROM ALL INFLOW DITCHES USING CLEAR WATER DIVERSION PIPES.
18. PERFORM LANDSCAPING ACTIVITIES FOR POND.
19. INSTALL ALL ROADWAY SAFETY FEATURES AND MAINTENANCE ACCESS ROAD AS REQUIRED AND AS SHOWN ON THE CONSTRUCTION PLANS. AFTER ALL COMPLETION OF ALL CONSTRUCTION ACTIVITIES, STABILIZE ALL DISTURBED AREAS TO ITS FINAL GRADING AND REMOVE SEDIMENT CONTROL DEVICES WITH THE PERMISSION OF SHA REC INSPECTOR.

REVISE TO:
NOTIFY QAD PER ESN-01 NOTE 2.
STAKEOUT LOD AND INSTALL TOCF.

CLEAR AND GRUB FOR ACCESS AND PERIMETER CONTROLS. INSTALL PERIMETER ESC CONTROLS.

INSTALL REMAINING ESC IN EACH WORK AREA PRIOR TO COMPLETING WORK.

COMPLETE THE WORK AS SHOWN IN THE CONTRACT DOCUMENTS.

APPLY PERMANENT STABILIZATION AND REMOVE ESC MEASURES ONCE PERMANENTLY STABILIZED PER QAD APPROVAL.

MOT SEQUENCE OF CONSTRUCTION:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY, INSTALL, & MAINTAIN ALL TEMPORARY TRAFFIC CONTROL EQUIPMENT FOR THE DURATION OF THE CONTRACT. ALL MAINTENANCE OF TRAFFIC DEVICES AND INSTALLATION OF THE DEVICES WILL BE INSPECTED ON A ROUTINE BASIS BY THE CONTRACTOR'S MAINTENANCE OF TRAFFIC MANAGER. THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES PROMPTLY.
2. ALL TRAFFIC CONTROL DEVICES, SHOULDER CLOSURES, AND LANE CLOSURES MUST ADHERE TO THE CURRENT EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD M.U.T.C.D.) AND SHA BOOK OF STANDARDS.
3. ALL SHOULDER CLOSURES SHALL BE DONE ACCORDING TO MDOT SHA's STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
4. THE CONTRACTOR SHALL CLOSE THE SHOULDER WITH A PHYSICAL BARRIER IF THE CONSTRUCTION OPERATION OCCURS WITHIN 10' FROM THE EDGE OF TRAVEL LANE.
5. NO LANE CLOSURES OR DISRUPTION OF TRAFFIC SHALL BE ALLOWED BETWEEN THE HOURS OF 5AM–9AM & 4PM–7PM WEEKDAYS. REFER TO THE CONTRACT SPECIAL PROVISIONS FOR ADDITIONAL CONSTRUCTION AND LANE CLOSURE RESTRICTIONS.
6. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE EXISTING MD 100 TRAVEL LANES.
7. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING SIDEWALKS AT ALL TIMES IN COMPLIANCE WITH CURRENT ADA STANDARDS.
8. A 48"X48" TRUCK CROSSING W11–10(1) WORK AREA SIGN SHALL BE INSTALLED IN ADVANCE OF STABILIZED CONSTRUCTION ENTRANCE ALONG MD 100 EB. AS DIRECTED BY THE ENGINEER, A 48"X48" W20–7a FLAGGER SIGN IN COMBINATION WITH THE 30"X24" W16–2P SHALL ALSO BE USED 500' IN ADVANCE OF THE CONSTRUCTION ENTRANCE. THE SIGNS SHALL BE INSTALLED ON PERMANENT SIGN SUPPORTS, NOT BLOCKING THE VIEWS OF EXISTING SIGNS, BE VISIBLE THROUGHOUT THE CONSTRUCTION DURATION AND SHALL BE REMOVED AFTER THE COMPLETION OF CONSTRUCTION.

Information from steps 9, 16 and 17 can be repurposed into plan notes

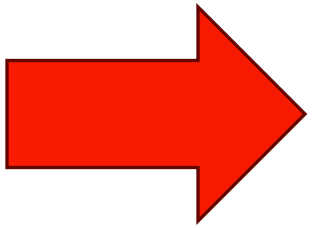
ORIGINAL SEQUENCE

SEQUENCE OF CONSTRUCTION:

1. CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS FROM THE STATE HIGHWAY ADMINISTRATION PRIOR TO MOBILIZATION.
2. NOTIFY THE REGIONAL ENVIRONMENTAL COORDINATOR (REC), INSPECTION AND COMPLIANCE PROGRAM, (410) 365–1064 AT LEAST SEVEN (7) DAYS PRIOR TO ANY LAND DISTURBANCE ACTIVITY AND HOLD A PRE–CONSTRUCTION MEETING WITH BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF PRD.
3. AT LEAST SEVENTY TWO (72) HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SUBMIT TO THE SHA REC INSPECTORS A WRITTEN NOTIFICATION STATING:

–WHEN THE CONTRACTOR INTENDS TO BEGIN CONSTRUCTION
–THE SOURCE OF BORROW MATERIAL
–THE DISPOSAL AREA OF EXCESS MATERIAL
–THE CONTRACTOR'S TENTATIVE CLOSING DATE

4. REMOVE EXISTING TRAFFIC BARRIER AT LOCATION SHOWN ON CONSTRUCTION PLAN.
5. CLEAR AND GRUB ALL AREAS WITHIN THE LOD NEEDED FOR SWM FACILITY, CONSTRUCTION ACCESS POINT CONTROLS AND ASSOCIATED EROSION AND SEDIMENT CONTROL DEVICES.
6. UPON COMPLETION OF LOD STAKEOUT, LOD LOCATIONS SHALL REVIEWED IN THE FIELD WITH THE ENGINEER AND REPRESENTATIVES PRIOR TO INSTALLATION OF ORANGE CONSTRUCTION FENCE.
7. PLACE ORANGE CONSTRUCTION FENCE ALONG ENTIRE LOD, EXCEPT AT THE CONSTRUCTION ENTRANCES, WATERS OF THE US AND AT LOCATIONS WHERE OTHER FENCES ARE INSTALLED.
8. INSTALL STABILIZED CONSTRUCTION ENTRANCE SCE–02, SAND BAG DAMS SD–01 TO SD–04, CLEAR WATER DIVERSION PIPES CWD–01 TO CWD–03, DIVERSION FENCES DF–01 TO DF–04, SUMP PIT SP–01 AND OTHER EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN EROSION AND SEDIMENT CONTROL PLAN SHEET.
9. ENSURE THE POND IS DRY PRIOR TO START OF ANY EXCAVATION. CONTRACTOR SHALL USE GRAVITY FLOW TO DEWATER THE EXISTING POND.
10. START POND EXCAVATION. INSTALL SOIL STABILIZATION MATTING ON ALL GRADED AREAS AS SHOWN ON THE CONSTRUCTION PLANS.
11. CONSTRUCT FOREBAY WITH OVERFLOW WEIR AS SHOWN ON THE PLAN.
12. REPLACE EXISTING END SECTION, INFLOW DITCHES AND ALL PROPOSED RIPRAPS AS SHOWN ON THE CONSTRUCTION PLAN.
13. REMOVE A PORTION OF EXISTING PRINCIPAL SPILLWAY AND OLD RISER STRUCTURE.
14. INSTALL NEW RISER STRUCTURE WITH PROPOSED ORIFICE, WEIR AND TRASH RACKS.
15. SOIL STABILIZATION MATTING SHALL BE INSTALLED ON ALL EXPOSED SLOPED AREAS AS INDICATED ON THE CONSTRUCTION PLAN. STABILIZE ALL DISTURBED AREA AT THE END OF EACH WORK DAY.
16. USE SUMP PIT AS REQUIRED DURING THE CONSTRUCTION OF POND TO CLEAN SEDIMENT LADEN WATER BEFORE DISCHARGING TO THE DOWNSTREAM.
17. CONTRACTOR SHALL USE GRAVITY FLOW TO DIVERT CLEAN WATER FROM ALL INFLOW DITCHES USING CLEAR WATER DIVERSION PIPES.
18. PERFORM LANDSCAPING ACTIVITIES FOR POND.
19. INSTALL ALL ROADWAY SAFETY FEATURES AND MAINTENANCE ACCESS ROAD AS REQUIRED AND AS SHOWN ON THE CONSTRUCTION PLANS. AFTER ALL COMPLETION OF ALL CONSTRUCTION ACTIVITIES, STABILIZE ALL DISTURBED AREAS TO ITS FINAL GRADING AND REMOVE SEDIMENT CONTROL DEVICES WITH THE PERMISSION OF SHA REC INSPECTOR.



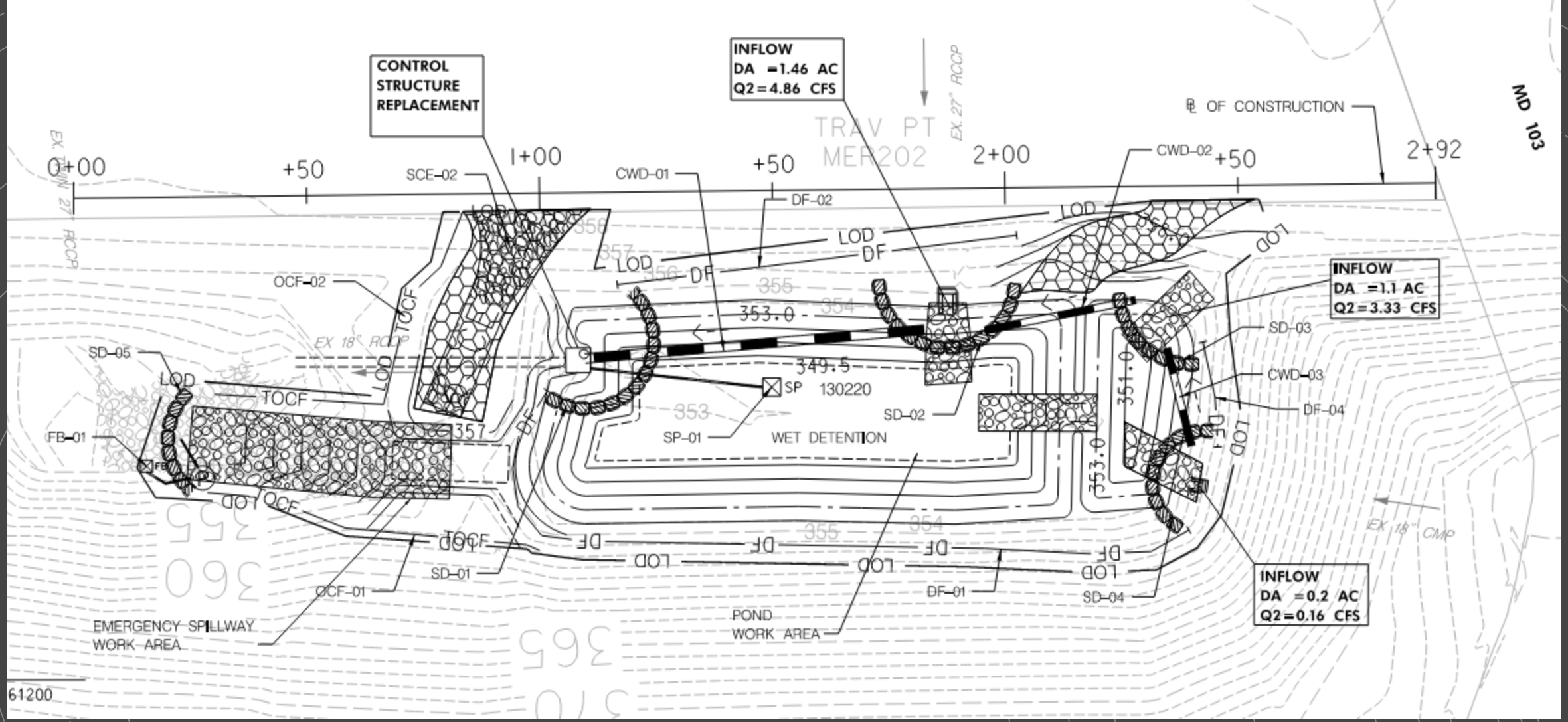
REVISED FLEXIBLE SEQUENCE

SEQUENCE OF CONSTRUCTION

1. NOTIFY QAD PER ESN-01 NOTE 2. STAKEOUT LOD AND INSTALL TOCF.
2. CLEAR AND GRUB FOR ACCESS AND PERIMETER EROSION AND SEDIMENT CONTROL INSTALLATION. INSTALL PERIMETER ESC CONTROLS IMMEDIATELY PER QAD APPROVAL.
3. INSTALL REMAINING ESC CONTROLS IN EACH WORK AREA PRIOR TO BEGINNING WORK.
4. PERFORM PROPOSED CONSTRUCTION AS SHOWN IN CONTRACT DOCUMENTS. THE EMERGENCY SPILLWAY WORK AREA WORK CANNOT BE COMPLETED DURING A FORECASTED SEVERE WEATHER EVENT.
5. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

EROSION AND SEDIMENT CONTROL NOTES

1. ONLY NECESSARY CLEARING AND GRUBBING SHALL OCCUR FOR THE INSTALLATION OF THE EROSION AND SEDIMENT CONTROL (ESC) MEASURES, AND ALL ESC MEASURES AND DEVICES SHALL BE IN PLACE AND FUNCTIONING PROPERLY FOR EACH CONSTRUCTION WORK AREA PRIOR TO MASS CLEARING AND GRUBBING OF THE WORKING AREA AND COMMENCING ANY CONSTRUCTION ACTIVITIES.
2. MAINTAIN ALL SEDIMENT CONTROL PRACTICES ACCORDING TO THE MARYLAND 2011 STANDARDS UNTIL THE ENTIRE SITE IS STABILIZED.
3. ENSURE THE POND IS DRY PRIOR TO THE START OF ANY EXCAVATION. CONTRACTOR TO USE SUMP PIT AS REQUIRED TO CLEAN SEDIMENT LADEN WATER BEFORE DISCHARGING DOWNSTREAM.
4. CONTRACTOR SHALL USE GRAVITY FLOW TO DIVERT WATER FROM ALL INFLOW DITCHES AROUND THE EXISTING POND USING CLEAR WATER DIVERSION PIPES.



Example Project – BMP Retrofit

Questions & Answers