

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)

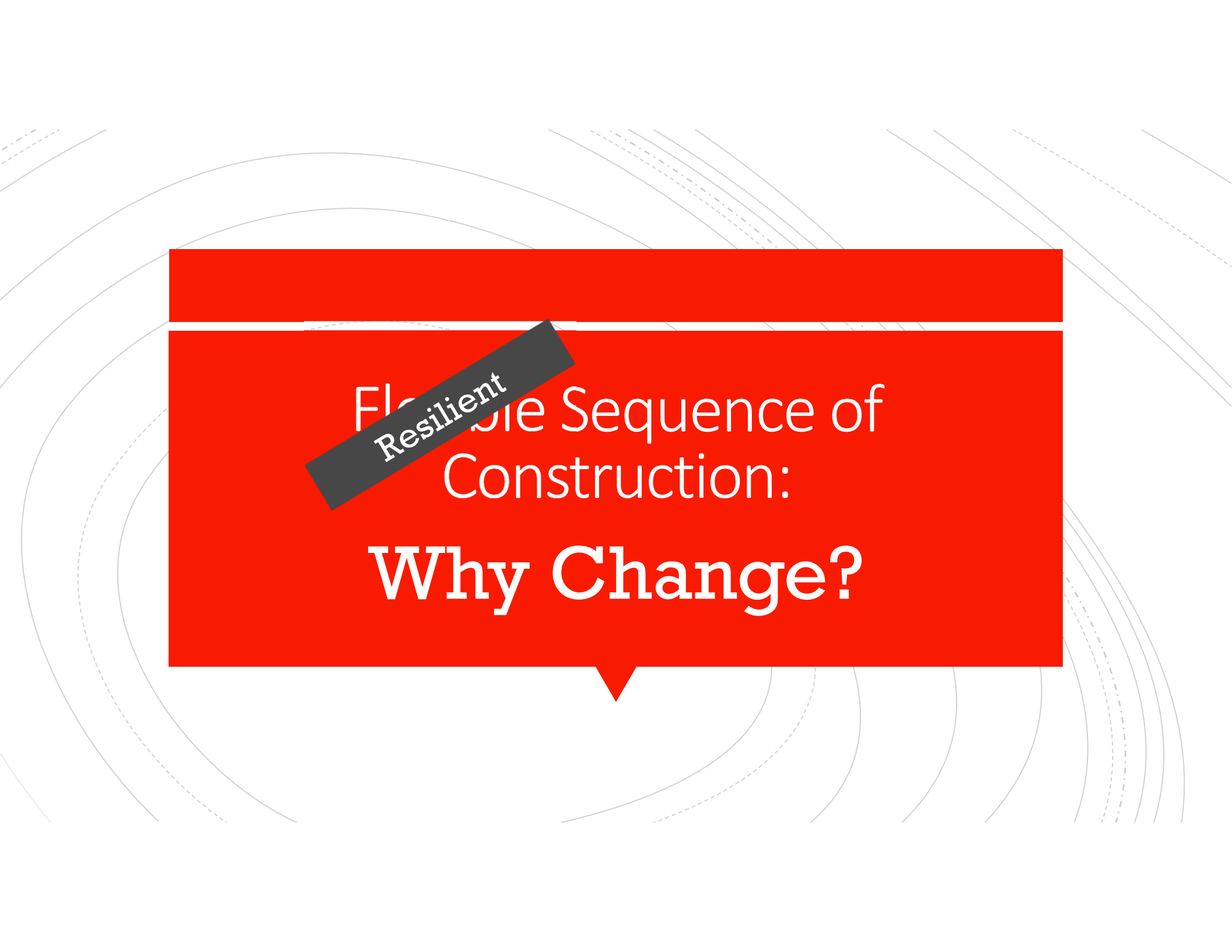
Tesfa Bogale (SHA – OHD – PRD)

Sonja Hardman (SHA – OHD – PRD)

Natalie DeColli (Consultant – SuYash)

Laura Ridler (Consultant – SuYash)

Amanda Barrett (Consultant – RKK)

The background features a series of concentric circles in light gray, some solid and some dashed, creating a ripple effect. A large red speech bubble is centered on the page, pointing downwards. Inside the bubble, the text is white. A dark gray diagonal banner is positioned over the top left of the bubble.

Flexible Sequence of
Construction:

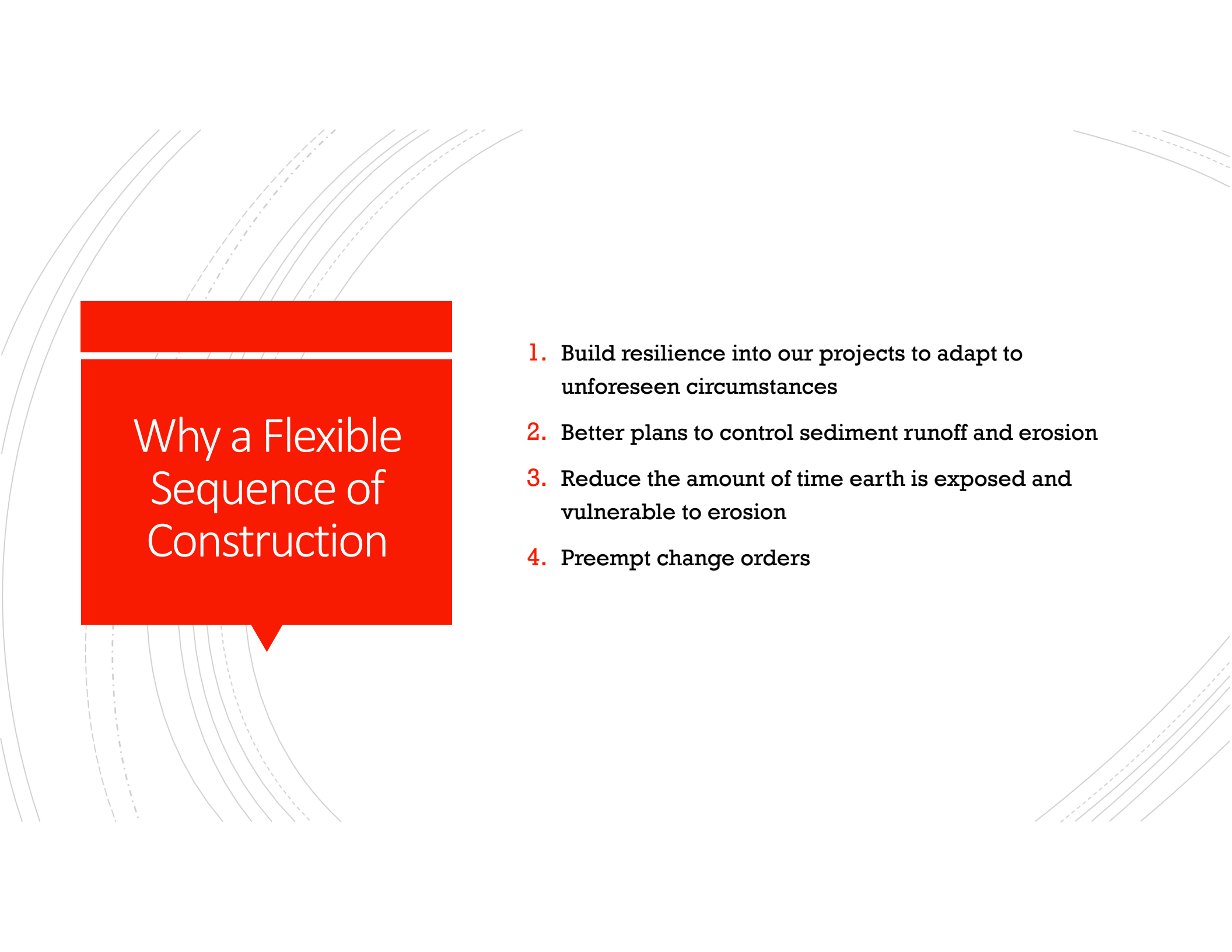
Why Change?

resilience:

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

-Merriam-Webster Dictionary



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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**



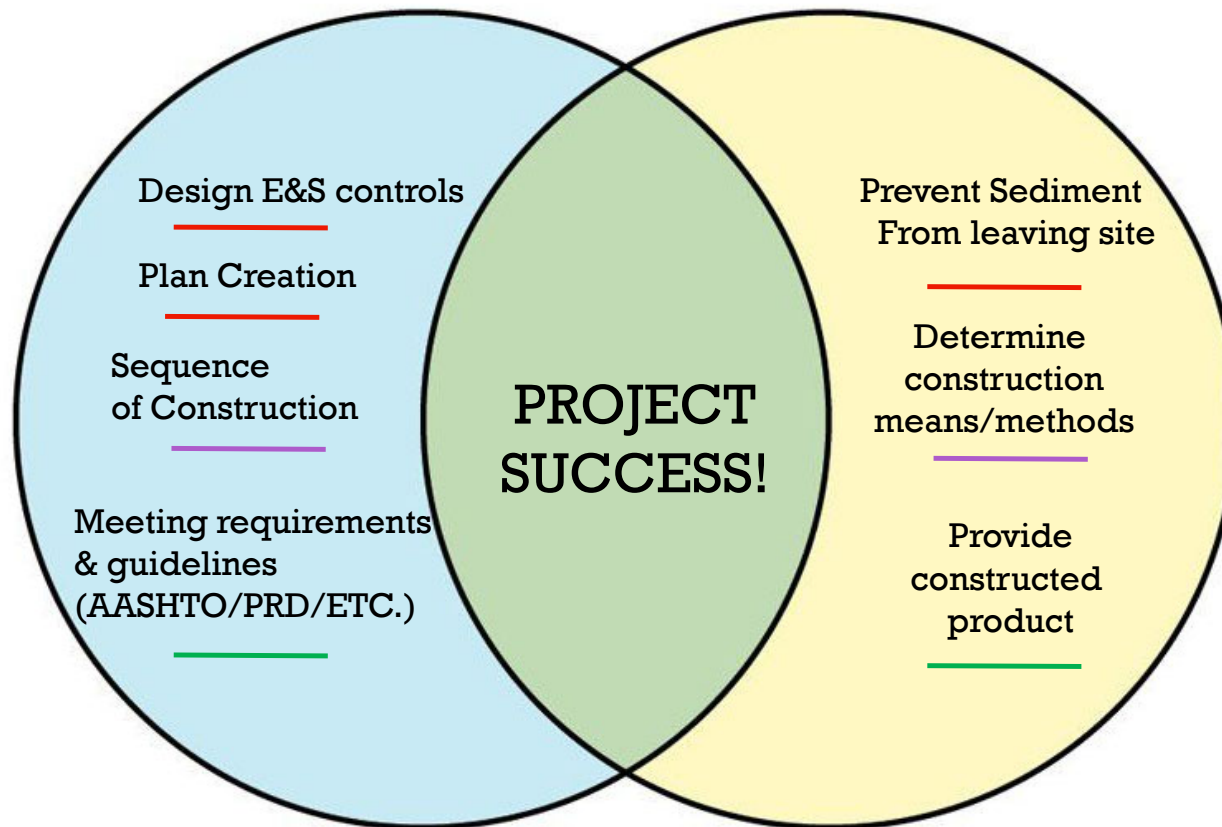


"But I'm not a contractor... how is this my problem?"

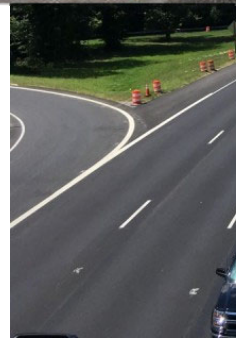
RESPONSIBILITY BREAKDOWN:

DESIGNER

CONTRACTOR



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

15. FINAL SITE SURVEY AND AS-BUILT SUBMISSION IN ACCORDANCE WITH SHM AS-BUILT DIRECTIVE

19. ONCE ALL AREAS ARE STABILIZED, AND WITH THE APPROVAL OF THE RRC INSPECTOR, REMOVE THE EROSION AND SEDIMENT CONTROLS AND STABILIZE ANY REMAINING AREAS.

ADMINISTRATION	
EROSION AND SEDIMENT CONTROL GENERAL NOTES	
SCALE: NTS	ADVERTISED DATE: 01/19/2009 CONTRACT NO. P00000084
DESIGNED BY: FL	COUNTY: PRINCE GEORGE'S
DRAWN BY: LT	LOBBLE
CHECKED BY: SP	HORIZONTAL SCALE
MODE/PPD: 10-SE-0704 12/14/06-0007	VERTICAL SCALE
DRAWING NO. ESN-02 OF 06	SHEET NO. 100 OF 100

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

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graph TD; A[Early step in sequence calls for pipes to be installed] --> B[Pipe is on backorder and cannot be obtained from supplier]; B --> C[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.]; C --> D[While waiting for review of mod, construction is stopped]; D --> E[Schedule is delayed, and contractor asks for an extra to cover unanticipated costs];
```

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?

WHAT IS FLEXIBILITY





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?

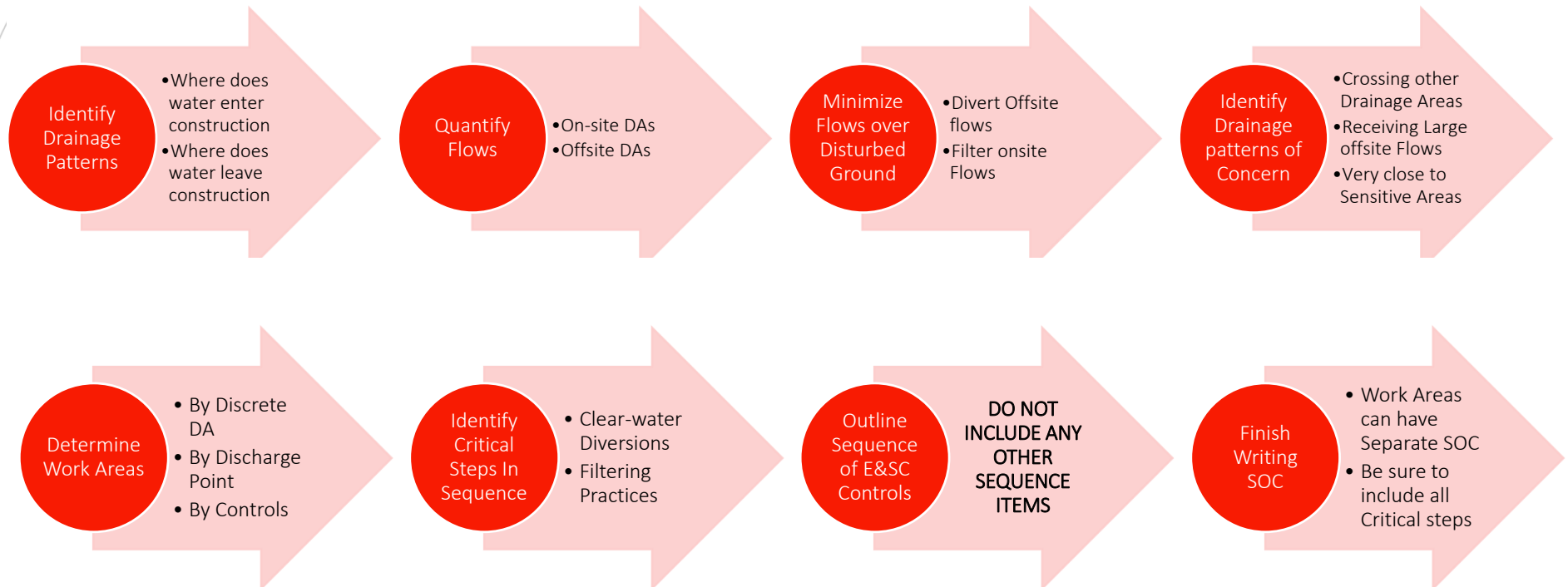


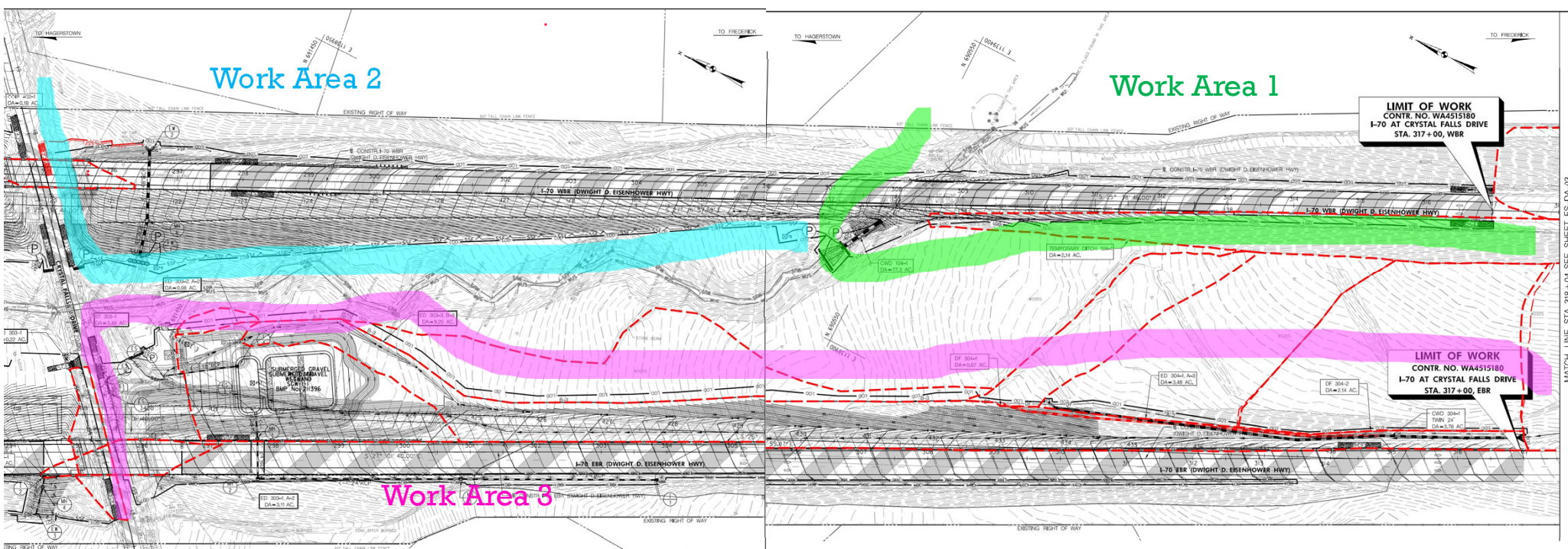
To ensure sediment controls are in place before earth is disturbed



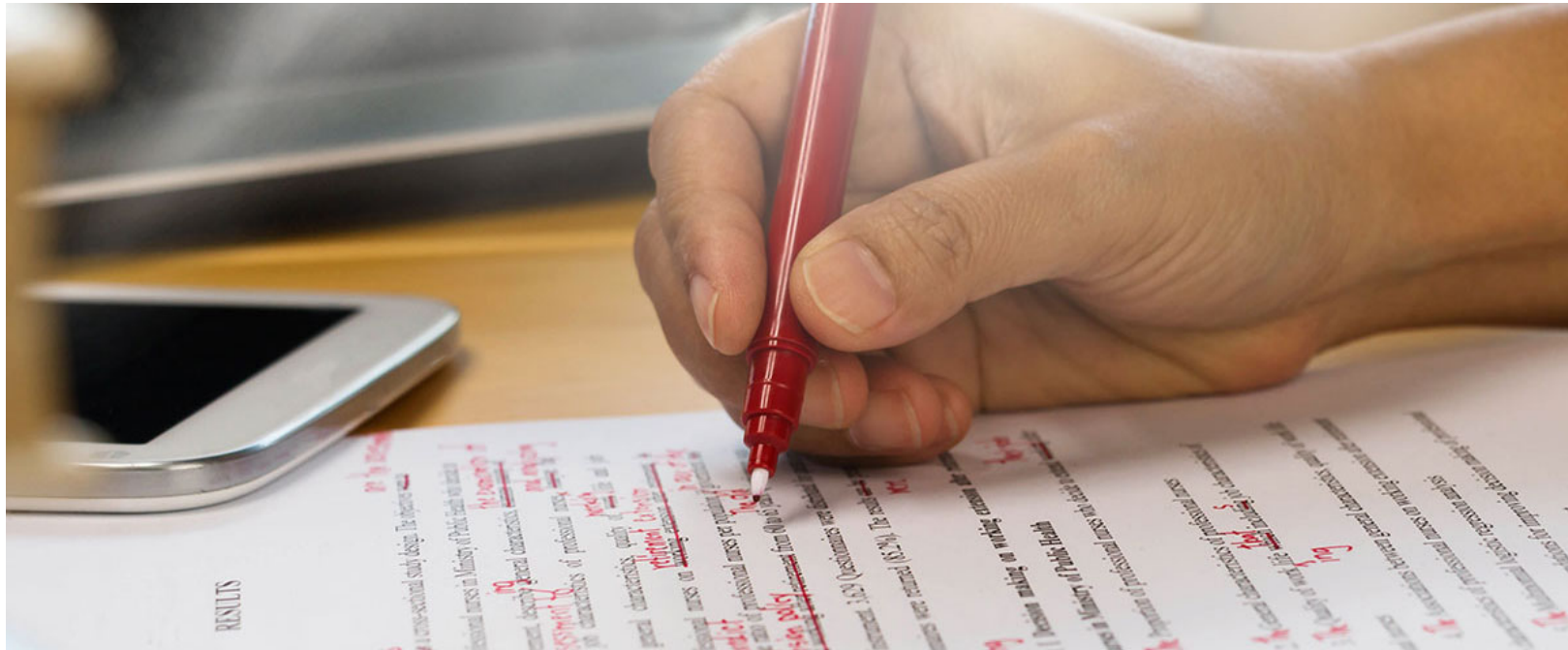
NOT to dictate
Means and Methods

Plan For Success

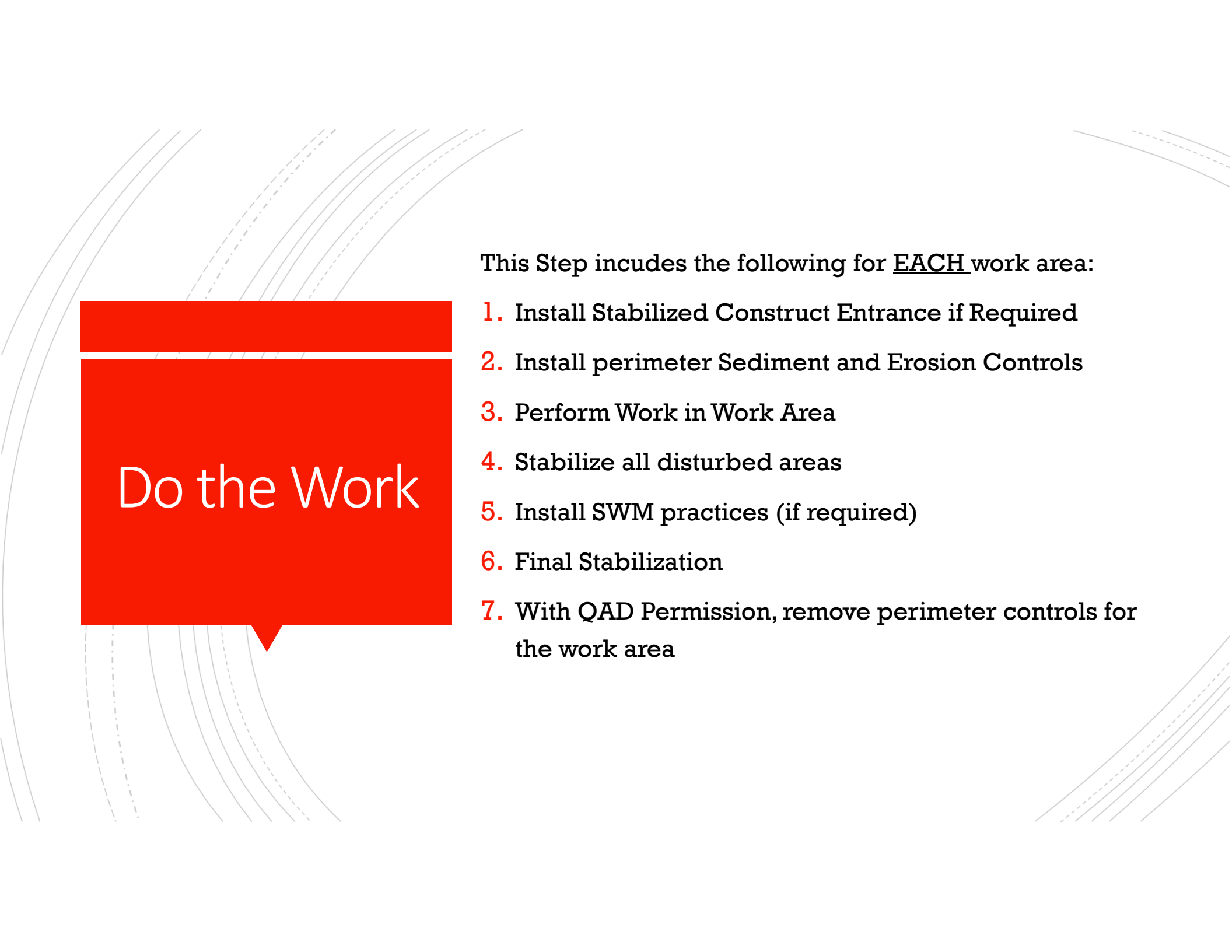




Work Areas: How do we select them?



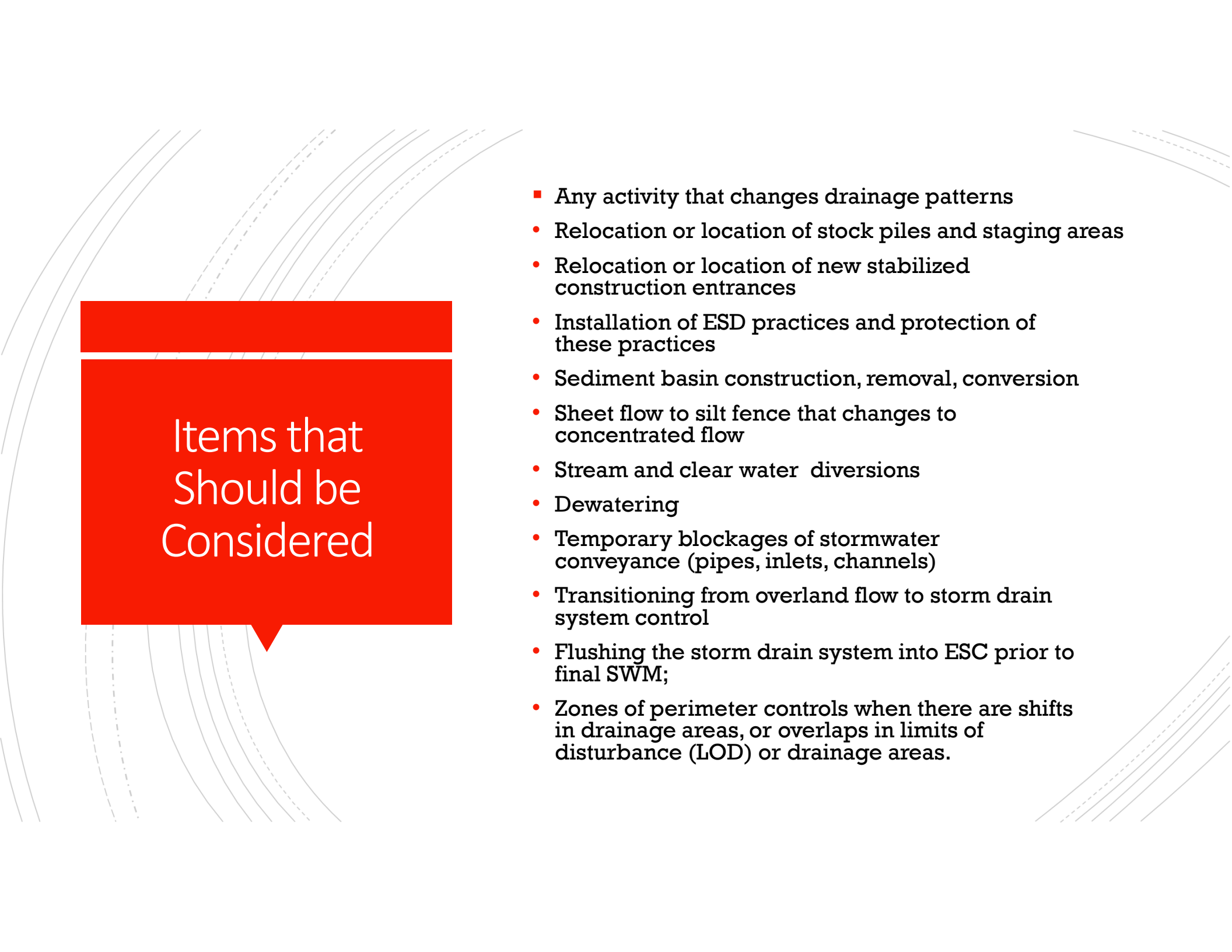
EXAMPLES: How can we provide flexibility?

The background of the slide features several sets of concentric, curved lines in a light gray color, creating a sense of motion or a stylized landscape. These lines are more prominent on the left side and fade towards the right.

Do the Work

This Step includes 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

The background of the slide features several thin, curved lines in a light gray color, some solid and some dashed, creating a sense of motion or flow. On the left side, there is a red rectangular box with a white triangle pointing downwards from its bottom center, containing the text 'Items that Should be Considered' in white. To the right of this box is a list of 14 items, each preceded by a red square bullet point.

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

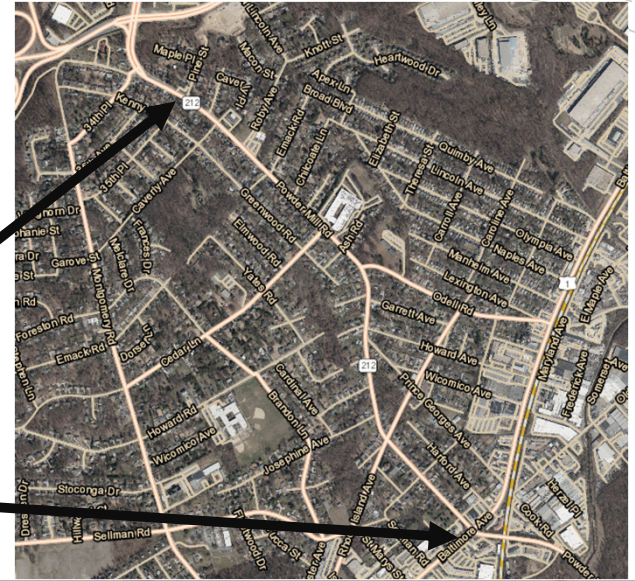
Improvements included:

- Curb/gutter

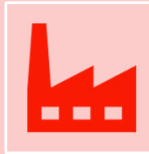
- Storm drain

- 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 LOG AND INSTALL LOG. 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 RETENTION INLET OPENINGS (E.G. F-3-2), 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 1 Internal
Robert A. [Signature]
Civil Engineering Division
PRD No. 11-PH-0087
Expiration Date: 06/30/2022

MDOT
MARYLAND DEPARTMENT
OF TRANSPORTATION
STATE HIGHWAY
ADMINISTRATION

HIGHWAY HYDRAULICS DIVISION
MD 20A, POWDER MILL ROAD
FROM PINE STREET TO
US 1 (BALTIMORE AVENUE)
URBAN RECONSTRUCTION PROJECT

EROSION AND SEDIMENT CONTROL GENERAL NOTES

SCALE: HORIZONTAL SCALE: VERTICAL SCALE: CONTRACT NO.: PG06B001

DESIGNED BY: JL COUNTY: FREDERICK, GEORGIA
DRAWN BY: LT LOCATION:
CHECKED BY: SP HORIZONTAL SCALE:
NOTED BY: [Signature] VERTICAL SCALE:
DRAWING NO. **ESN-02** OF **06** SHEET NO. 150 OF 200

Get from here..... to here!

Tied to
MOT
Phasing

Specific ESC Plan
Sheets Dependent
on Verizon Utility
Relocation

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. STABILIZE 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. **(ES1-02 TO 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

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.

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

DESIGNED BY	_____	COUNTY	SPRING GEORGIA
DRAWN BY	_____	LOCATION	_____
CHECKED BY	_____	HORIZONTAL SCALE	_____
DATE	_____	VERTICAL SCALE	_____
DRAWING NO.	ESN-02	OF	06
SHEET NO.	100	OF	208

Step 1

Notify QAD per ESN-01 Note

2. Stakeout LOD/Install TOCF

Step 2

Clear & Grub for Perimeter Controls,
Install ESC Perimeter Controls

Step 3

Install remaining ESC measures in each
work area

Step 4

Complete project work (noting which
items can be completed concurrently if
applicable)

Project specific notes can be called out
on ESC plan sheets

Step 5

Once all contributing drainage areas
are permanently stabilized, construct
BMPs with QAD approval.

Step 6

Permanent stabilization/QAD approval

SEQUENCE OF CONSTRUCTION

1. STAKE OUT LOD AND INSTALL TOCF PER QAD APPROVAL.
2. 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.
3. CLEAR AND GRUB TO INSTALL ALL REMAINING ESC FOR EACH WORK AREA PRIOR TO PERFORMING WORK IN THE RESPECTIVE WORK AREA.
4. 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.
5. PRIOR TO CONSTRUCTION SWM FACILITIES, ~~BMPs 102512, 102510, 102511, 102514, 102515, 102513, 102516,~~ 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.
6. PERMANENTLY STABILIZE ALL REMAINING DISTURBED AREAS. WITH THE APPROVAL OF QAD, REMOVE ESC MEASURES AND PERMANENTLY STABILIZE THOSE AREAS.

Original Sequence

SEQUENCE OF CONSTRUCTION

NOTIFY WATER MANA

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 MCL 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 EBS CONTROLS.

PHASE I

- CONTRACTOR SHALL: (1) FLOOD INTERIOR EGRESS CORRIDORS. INSTALL ALL DIVERGENCE FENCE (D/F), SATY FENCE (D/F), REPAIR, OUTLET, PROTECTION (D/F), AND TEMPORARY ADJUSTABLE BEAMS TALL, AND TEMPORARY PIPE DIVERGENCE AS SHOWN ON DRAWING. (2) CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. TEMPORARILY BLOCK ALL INLETS UNTIL PROTECTION IS IN PLACE. (3) CONSTRUCT THE NEW SIDEWALK ENHANCEMENTS AS SHOWN. STABILIZE ANY DISTURBED AREA AT THE END OF EACH WORK DAY THAT DOES NOT FLOW TO A SEGMENT CONTROL DEVICE.
- (E51) INSTALL PIPE AS SHOWN FROM STA 1046+00 TO 1080+70. INLETS 1/21, 1/22, 1/23, 1/24, 1/25, 1/26, 1/27, 1/28, 1/29, 1/30, 1/31, 1/32, 1/33, 1/34, 1/35, 1/36, 1/37, 1/38, 1/39, 1/40, 1/41, 1/42, 1/43, 1/44, 1/45, 1/46, 1/47, 1/48, 1/49, 1/50, 1/51, 1/52, 1/53, 1/54, 1/55, 1/56, 1/57, 1/58, 1/59, 1/60, 1/61, 1/62, 1/63, 1/64, 1/65, 1/66, 1/67, 1/68, 1/69, 1/70, 1/71, 1/72, 1/73, 1/74, 1/75, 1/76, 1/77, 1/78, 1/79, 1/80, 1/81, 1/82, 1/83, 1/84, 1/85, 1/86, 1/87, 1/88, 1/89, 1/90, 1/91, 1/92, 1/93, 1/94, 1/95, 1/96, 1/97, 1/98, 1/99, 1/100, 1/101, 1/102, 1/103, 1/104, 1/105, 1/106, 1/107, 1/108, 1/109, 1/110, 1/111, 1/112, 1/113, 1/114, 1/115, 1/116, 1/117, 1/118, 1/119, 1/120, 1/121, 1/122, 1/123, 1/124, 1/125, 1/126, 1/127, 1/128, 1/129, 1/130, 1/131, 1/132, 1/133, 1/134, 1/135, 1/136, 1/137, 1/138, 1/139, 1/140, 1/141, 1/142, 1/143, 1/144, 1/145, 1/146, 1/147, 1/148, 1/149, 1/150, 1/151, 1/152, 1/153, 1/154, 1/155, 1/156, 1/157, 1/158, 1/159, 1/160, 1/161, 1/162, 1/163, 1/164, 1/165, 1/166, 1/167, 1/168, 1/169, 1/170, 1/171, 1/172, 1/173, 1/174, 1/175, 1/176, 1/177, 1/178, 1/179, 1/180, 1/181, 1/182, 1/183, 1/184, 1/185, 1/186, 1/187, 1/188, 1/189, 1/190, 1/191, 1/192, 1/193, 1/194, 1/195, 1/196, 1/197, 1/198, 1/199, 1/200, 1/201, 1/202, 1/203, 1/204, 1/205, 1/206, 1/207, 1/208, 1/209, 1/210, 1/211, 1/212, 1/213, 1/214, 1/215, 1/216, 1/217, 1/218, 1/219, 1/220, 1/221, 1/222, 1/223, 1/224, 1/225, 1/226, 1/227, 1/228, 1/229, 1/230, 1/231, 1/232, 1/233, 1/234, 1/235, 1/236, 1/237, 1/238, 1/239, 1/240, 1/241, 1/242, 1/243, 1/244, 1/245, 1/246, 1/247, 1/248, 1/249, 1/250, 1/251, 1/252, 1/253, 1/254, 1/255, 1/256, 1/257, 1/258, 1/259, 1/260, 1/261, 1/262, 1/263, 1/264, 1/265, 1/266, 1/267, 1/268, 1/269, 1/270, 1/271, 1/272, 1/273, 1/274, 1/275, 1/276, 1/277, 1/278, 1/279, 1/280, 1/281, 1/282, 1/283, 1/284, 1/285, 1/286, 1/287, 1/288, 1/289, 1/290, 1/291, 1/292, 1/293, 1/294, 1/295, 1/296, 1/297, 1/298, 1/299, 1/300, 1/301, 1/302, 1/303, 1/304, 1/305, 1/306, 1/307, 1/308, 1/309, 1/310, 1/311, 1/312, 1/313, 1/314, 1/315, 1/316, 1/317, 1/318, 1/319, 1/320, 1/321, 1/322, 1/323, 1/324, 1/325, 1/326, 1/327, 1/328, 1/329, 1/330, 1/331, 1/332, 1/333, 1/334, 1/335, 1/336, 1/337, 1/338, 1/339, 1/340, 1/341, 1/342, 1/343, 1/344, 1/345, 1/346, 1/347, 1/348, 1/349, 1/350, 1/351, 1/352, 1/353, 1/354, 1/355, 1/356, 1/357, 1/358, 1/359, 1/360, 1/361, 1/362, 1/363, 1/364, 1/365, 1/366, 1/367, 1/368, 1/369, 1/370, 1/371, 1/372, 1/373, 1/374, 1/375, 1/376, 1/377, 1/378, 1/379, 1/380, 1/381, 1/382, 1/383, 1/384, 1/385, 1/386, 1/387, 1/388, 1/389, 1/390, 1/391, 1/392, 1/393, 1/394, 1/395, 1/396, 1/397, 1/398, 1/399, 1/400, 1/401, 1/402, 1/403, 1/404, 1/405, 1/406, 1/407, 1/408, 1/409, 1/410, 1/411, 1/412, 1/413, 1/414, 1/415, 1/416, 1/417, 1/418, 1/419, 1/420, 1/421, 1/422, 1/423, 1/424, 1/425, 1/426, 1/427, 1/428, 1/429, 1/430, 1/431, 1/432, 1/433, 1/434, 1/435, 1/436, 1/437, 1/438, 1/439, 1/440, 1/441, 1/442, 1/443, 1/444, 1/445, 1/446, 1/447, 1/448, 1/449, 1/450, 1/451, 1/452, 1/453, 1/454, 1/455, 1/456, 1/457, 1/458, 1/459, 1/460, 1/461, 1/462, 1/463, 1/464, 1/465, 1/466, 1/467, 1/468, 1/469, 1/470, 1/471, 1/472, 1/473, 1/474, 1/475, 1/476, 1/477, 1/478, 1/479, 1/480, 1/481, 1/482, 1/483, 1/484, 1/485, 1/486, 1/487, 1/488, 1/489, 1/490, 1/491, 1/492, 1/493, 1/494, 1/495, 1/496, 1/497, 1/498, 1/499, 1/500, 1/501, 1/502, 1/503, 1/504, 1/505, 1/506, 1/507, 1/508, 1/509, 1/510, 1/511, 1/512, 1/513, 1/514, 1/515, 1/516, 1/517, 1/518, 1/519, 1/520, 1/521, 1/522, 1/523, 1/524, 1/525, 1/526, 1/527, 1/528, 1/529, 1/530, 1/531, 1/532, 1/533, 1/534, 1/535, 1/536, 1/537, 1/538, 1/539, 1/540, 1/541, 1/542, 1/543, 1/544, 1/545, 1/546, 1/547, 1/548, 1/549, 1/550, 1/551, 1/552, 1/553, 1/554, 1/555, 1/556, 1/557, 1/558, 1/559, 1/560, 1/561, 1/562, 1/563, 1/564, 1/565, 1/566, 1/567, 1/568, 1/569, 1/570, 1/571, 1/572, 1/573, 1/574, 1/575, 1/576, 1/577, 1/578, 1/579, 1/580, 1/581, 1/582, 1/583, 1/584, 1/585, 1/586, 1/587, 1/588, 1

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.

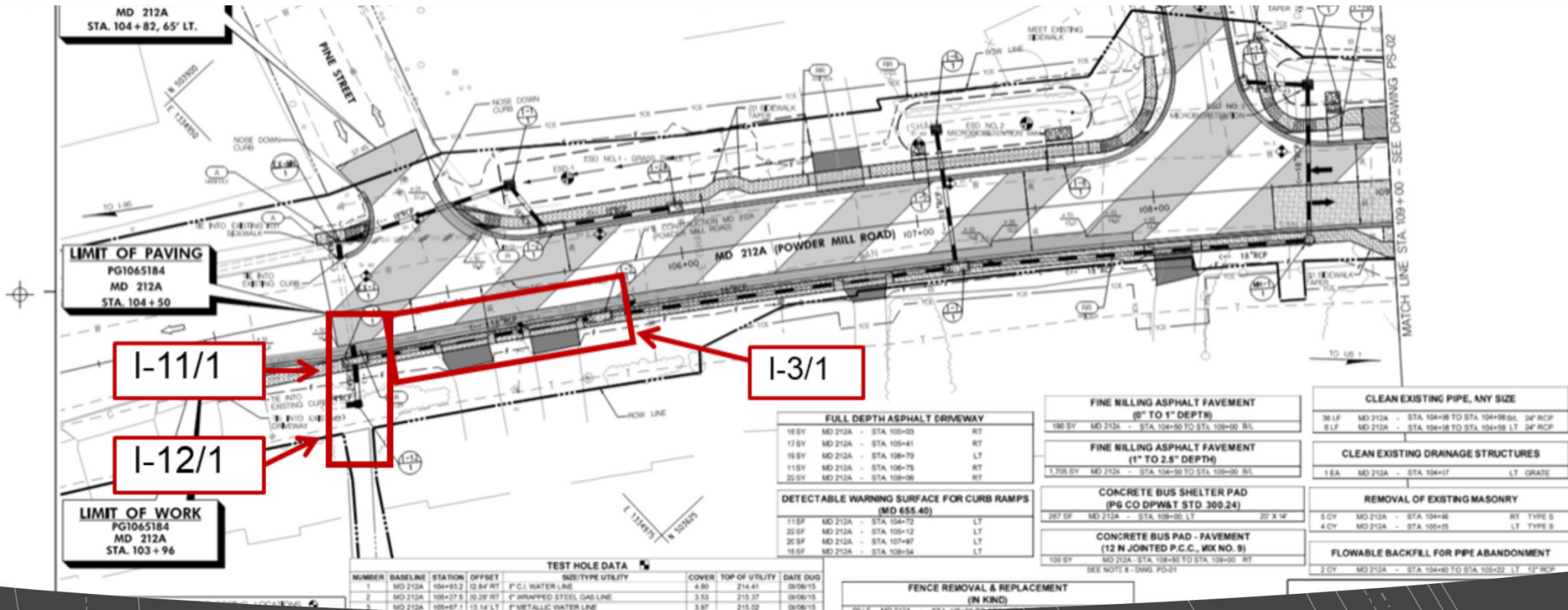
Detailed Analysis Point 3-4 and Effects

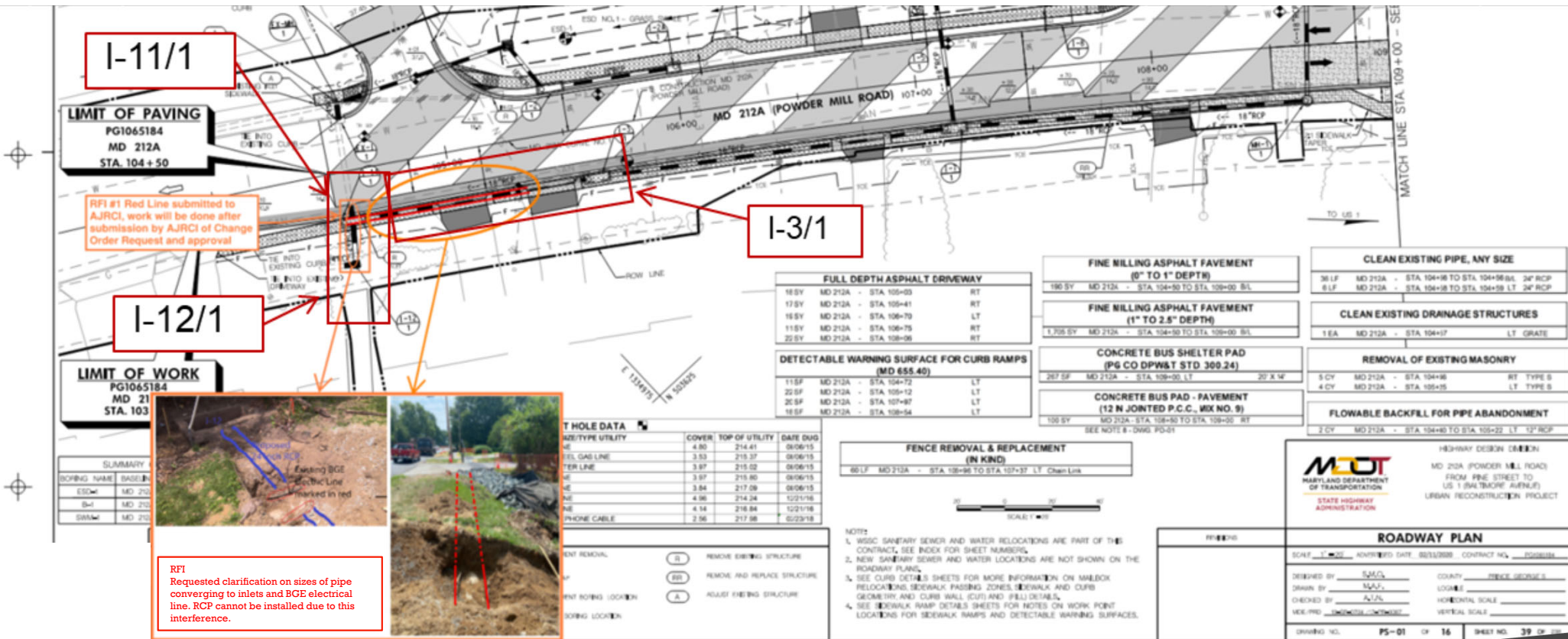
Flexible Sequence after Edits

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.





First Conflict BG&E Electrical Cable

RAMP SCHEDULE					STANDARD ENTRANCE RESIDENTIAL & COMMERCIAL (6 IN P.C.C. MIX NO. 8)		8 INCH CONCRETE SIDEWALK	
BASISLINE	STATION	OFFSET	RAMP TYPE	MD SHA STD	REMARKS			
MD12A	STA 104+72	37' LT	MOD PERP W/ BUFFER		SEE SIDEWALK DETAIL B	11' BY MD 212A - STA 104+03 RT	METHOD 1 (MD 630-02)	
MD12A	STA 104+12	30' LT	MOD PERP W/ BUFFER		SEE SIDEWALK DETAIL B	18' BY MD 212A - STA 104+41 RT	METHOD 1 (MD 630-02)	
MD12A	STA 104+87	29' LT	MOD COMBINATION		SEE SIDEWALK DETAIL A	22' BY MD 212A - STA 104+70 LT	METHOD 2 (MD 630-02)	
MD12A	STA 104+84	29' LT	MOD COMBINATION		SEE SIDEWALK DETAIL A	14' BY MD 212A - STA 104+06 RT	METHOD 1 (MD 630-02)	

LIMIT OF PAVING	
P01065184	
MD 212A	
STA. 108 + 23, 81' LT.	

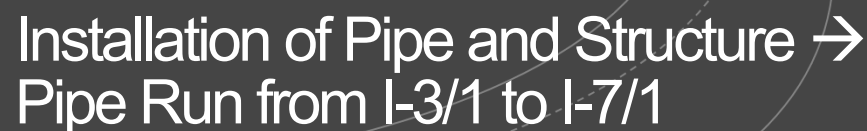
RFI

CONSTRUCTION DELAY AVOIDED DUE TO FLEXIBLE SEQUENCE OF CONSTRUCTION

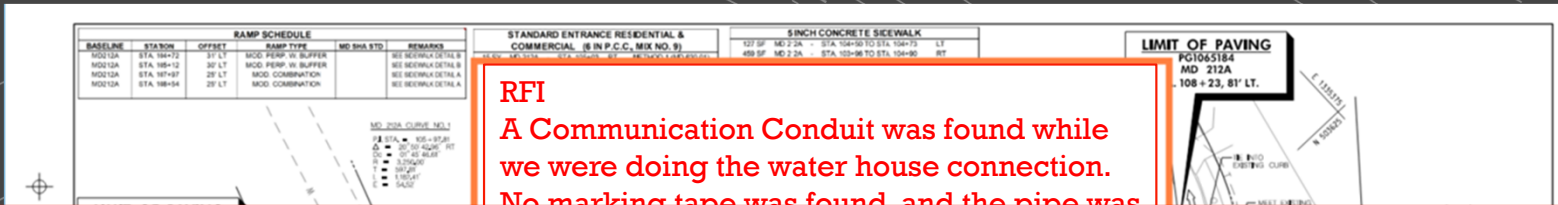
ROADWAY PLAN	
☐ FULL DEPTH ASPHALT PAVEMENT FOR ROADWAY ☒ FULL DEPTH ASPHALT PAVEMENT FOR DRIVEWAYS ☐ CONCRETE PAVEMENT FOR DRIVEWAYS	☐ CONCRETE PAVEMENT FOR SIDEWALK ☐ 8 INCH REINFORCED CONCRETE SIDEWALK W/ CURB WALL CURB DETECTABLE WARNING SYSTEM

ROADWAY PLAN	
☐ FULL DEPTH ASPHALT PAVEMENT FOR ROADWAY ☒ FULL DEPTH ASPHALT PAVEMENT FOR DRIVEWAYS ☐ CONCRETE PAVEMENT FOR DRIVEWAYS	☐ CONCRETE PAVEMENT FOR SIDEWALK ☐ 8 INCH REINFORCED CONCRETE SIDEWALK W/ CURB WALL CURB DETECTABLE WARNING SYSTEM

Second Conflict →
BG&E Electrical Cable







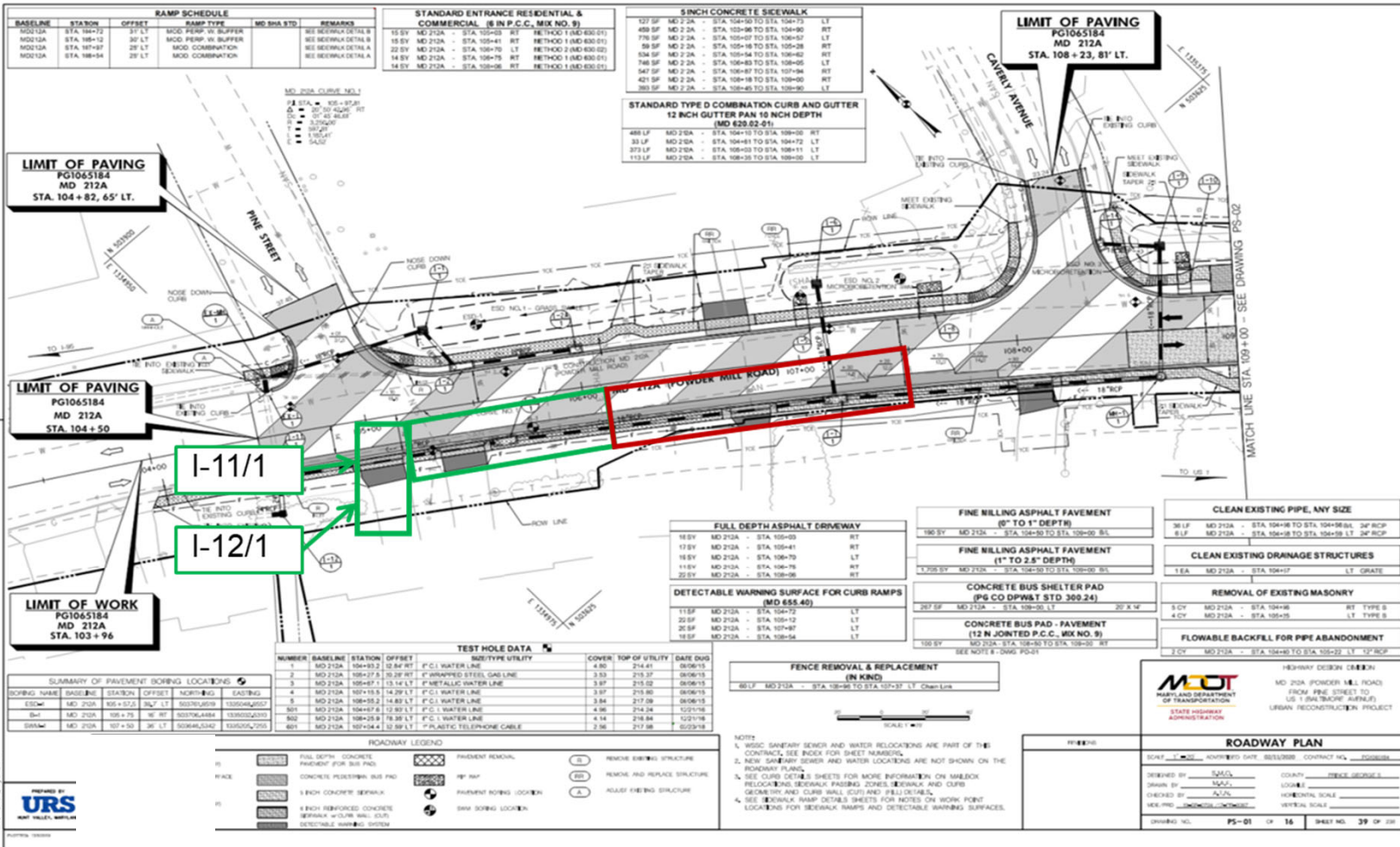
RFI

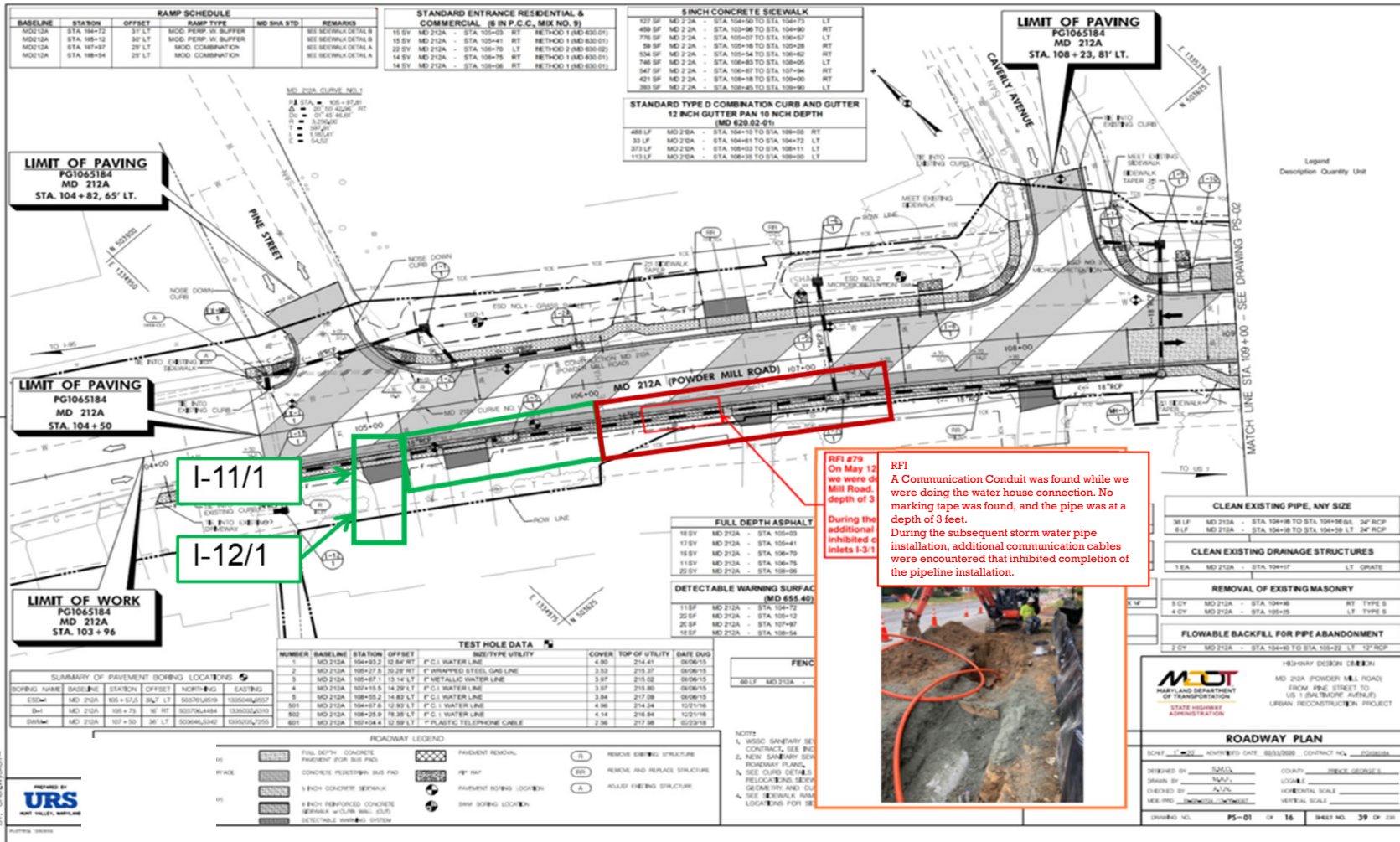
A Communication Conduit was found while we were doing the water house connection. No marking tape was found, and the pipe was

CONSTRUCTION DELAY AVOIDED DUE TO FLEXIBLE SEQUENCE OF CONSTRUCTION



Third Conflict →
Communication Cable





RAMP SCHEDULE				
BASELINE	STATION	OFFSET	RAMP TYPE	REMARKS
MD10A	STA 100+12	30' LT	MOD. PERP. VI. BUFFER	SEE SIDEWALK DETAIL B
MD10A	STA 100+12	30' LT	MOD. PERP. VI. BUFFER	SEE SIDEWALK DETAIL B
MD10A	STA 100+12	28' LT	MOD. COMBINATION	SEE SIDEWALK DETAIL A
MD10A	STA 100+12	28' LT	MOD. COMBINATION	SEE SIDEWALK DETAIL A

STANDARD ENTRANCE RESIDENTIAL & COMMERCIAL (8 IN P.C.C. MIX NO. 9)	5 INCH CONCRETE SIDEWALK
127 SF. MD 2.2A - STA 100+10 TO STA 100+12 LT	
489 SF. MD 2.2A - STA 100+10 TO STA 100+12 RT	

LIMIT OF PAVING
PG1005184
MD 212A
108+23.81' LT.

RFI

A Communication Conduit was found while we were doing the water house connection. No marking tape was found, and the pipe was

CONSTRUCTION DELAY AVOIDED DUE TO FLEXIBLE SEQUENCE OF CONSTRUCTION



ROADWAY PLAN			
DESIGNED BY: T&E	COUNTY: PRINCE GEORGE'S	DATE: 10/1/10	PROJECT NO: 1005184
DRAWN BY: T&E	COUNTY: PRINCE GEORGE'S	DATE: 10/1/10	PROJECT NO: 1005184
CHECKED BY: T&E	COUNTY: PRINCE GEORGE'S	DATE: 10/1/10	PROJECT NO: 1005184
REVIEWED BY: T&E	COUNTY: PRINCE GEORGE'S	DATE: 10/1/10	PROJECT NO: 1005184
DATE: 10/1/10	PROJECT NO: 1005184	SHEET NO: 39 OF 39	

SINCH CONCRETE SIDEWALK				
127 SF	MD 2 2A	-	STA 104+50 TO STA 104+75	LY
459 SF	MD 2 2A	-	STA 103+96 TO STA 104+90	RT
776 SF	MD 2 2A	-	STA 105+07 TO STA 106+57	LY
59 SF	MD 2 2A	-	STA 105+16 TO STA 105+28	RT
534 SF	MD 2 2A	-	STA 105+54 TO STA 106+62	RT

488 LF	MO 2'0A	-	STA. 104+10 TO STA. 109+00	RT
33 LF	MO 2'0A	-	STA. 104+61 TO STA. 104+72	LT
373 LF	MO 2'0A	-	STA. 106+03 TO STA. 108+11	LT
113 LF	MO 2'0A	-	STA. 108+35 TO STA. 109+00	LT

LIMIT OF WORK
PG1065184
MD 212A
STA. 103+96

TOP OF UTILITY	DATE DUG
214.41	08/06/15
215.37	08/06/15
215.02	08/06/15
215.90	08/06/15
217.08	08/06/15
214.04	12/21/16
216.84	12/21/16
212.98	01/23/18

	CLEAN EXISTING PIPE, ANY SIZE			
36 LF	MD 212A	-	STA 104+06 TO STA 104+08.50	24" RCP
8 LF	MD 212A	-	STA 104+08 TO STA 104+09.17	24" RCP
	CLEAN EXISTING DRAINAGE STRUCTURES			
1 EA	MD 212A	-	STA 104+07	12" GRATE

	REMOVAL OF EXISTING MASONRY			
20' X 14'	5 CY	MD 212A -	STA 104+96	RT TYPE S
	4 CY	MD 212A -	STA 105+75	LT TYPE S
	FLOWABLE BACKFILL FOR PILE ABANDONMENT			

2 CY MD 212A - STA 104+00 TO STA 105+22 LT 12" RCP

MDOT
MARYLAND DEPARTMENT
OF TRANSPORTATION

STATE HIGHWAY
ADMINISTRATION

HIGHWAY DESIGN SECTION

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

ROADWAY PLAN	
SHEET <u>17</u> OF <u>20</u> REVISION DATE: <u>08/13/2008</u> CONTRACT NO. <u>2008000000000000</u>	
DESIGNED BY <u>SM/CA</u>	COUNTY <u>PRINCE GEORGE'S</u>
DRAWN BY <u>SM/CA</u>	LOCALITY _____
CHECKED BY <u>SM/CA</u>	HORIZONTAL SCALE _____
REV. PREP <u>08/13/2008</u> <u>08/13/2008</u>	VERTICAL SCALE _____

Drawing No.	PS-01	of	16	Sheet No.	39	of	238
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1

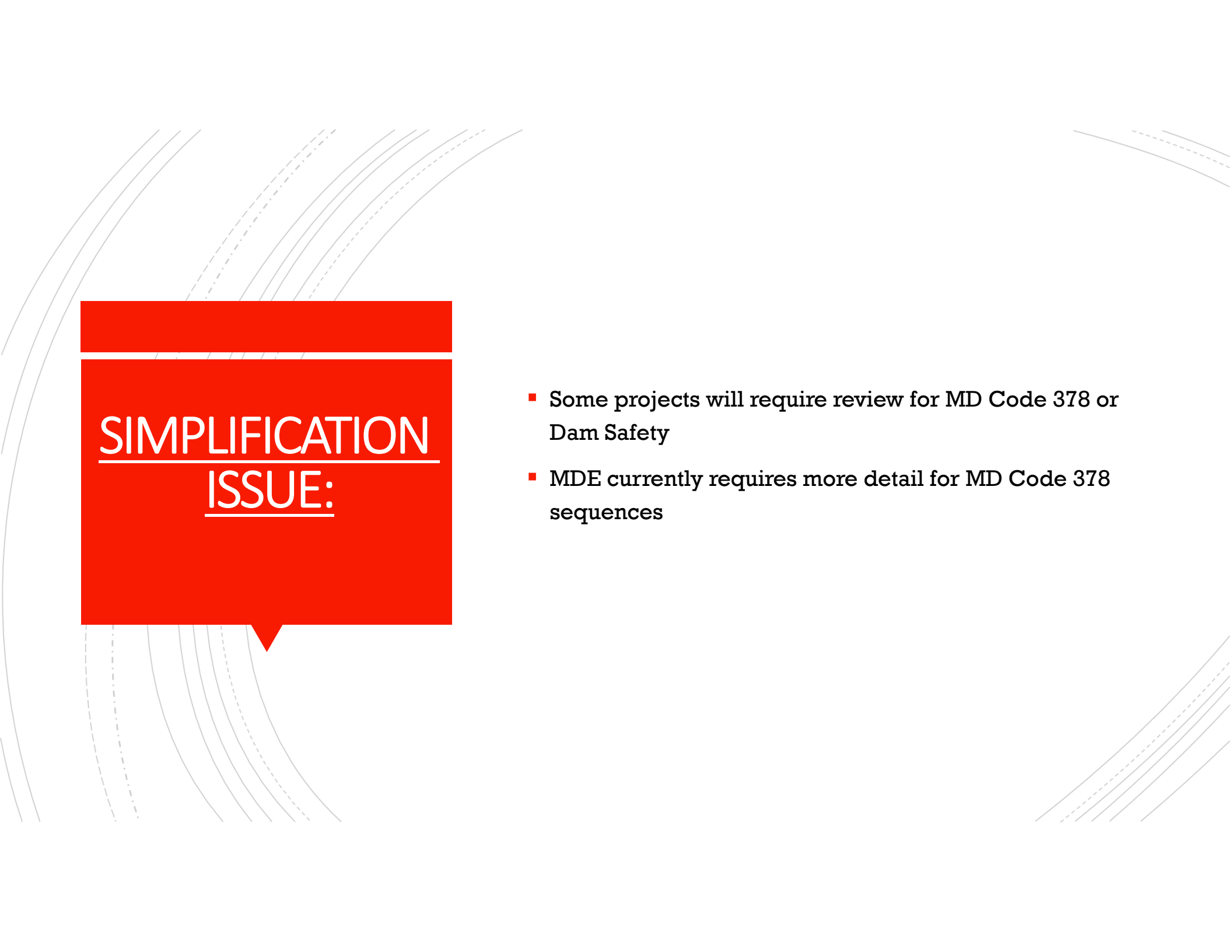


▼ Special Design Considerations

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!

The background of the slide features several sets of thin, curved lines in light gray, some solid and some dashed, creating a sense of motion or flow. A prominent red speech bubble is positioned on the left side, containing the main title.

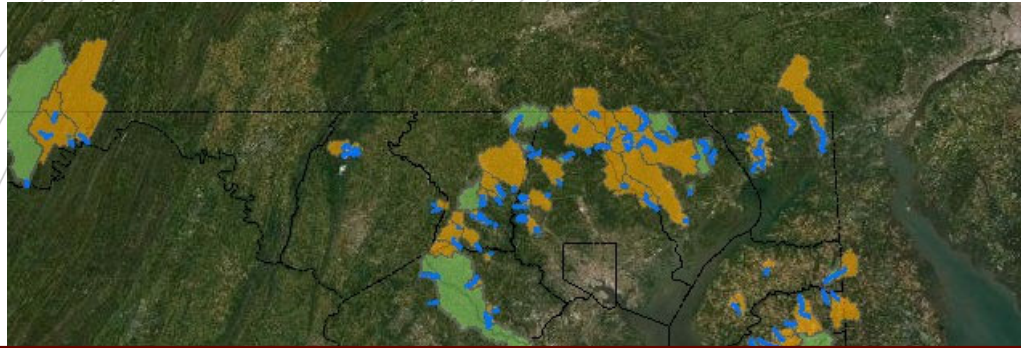
SIMPLIFICATION ISSUE:

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

The background of the slide features several sets of thin, curved lines in a light gray color, some solid and some dashed, creating a sense of motion or flow. A large, solid red rectangle is positioned on the left side, containing the text 'SIMPLIFICATION SOLUTION:'.

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

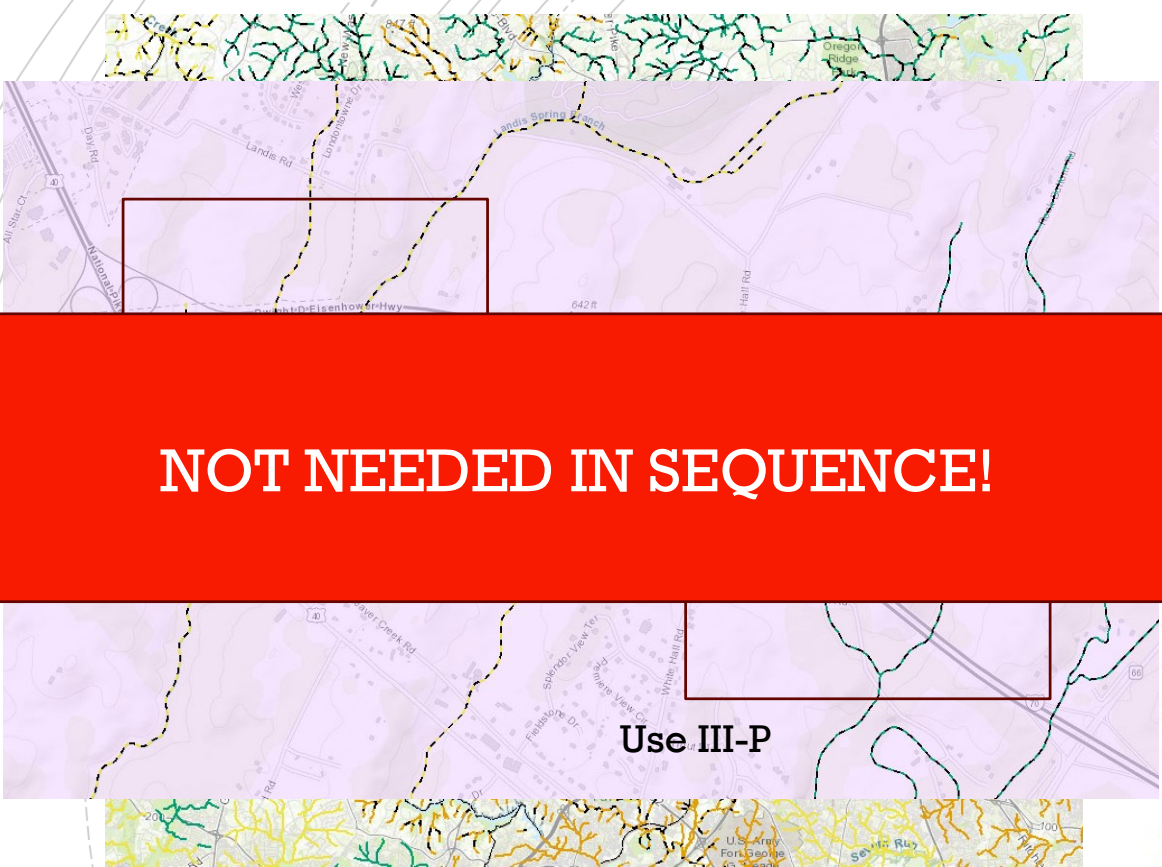
FOR DISCHARGES WITHIN A DRAINAGE AREA TO, OR DIRECTLY INTO, A TRIBUTARY THAT IS DESIGNATED AS TIER II, PERFORM THE FOLLOWING.

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.

Rivers and Streams

- I
- I-P
- II
- II-P
- III
- III-P
- IV
- IV-P

Additional Requirements:

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

Wetlands and Waterways

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 LIMITED TO FLOODPLAINS; WETLANDS; WETLAND BUFFERS; CHESAPEAKE BAY CRITICAL AREA; FORESTS; TREE CONSERVATION AND PROTECTION AREAS; ARCHEOLOGICAL SITES; HISTORIC SITES; PARKLAND; RARE, THREATENED, OR ENDANGERED SPECIES AND CRITICAL HABITATS; OPEN WATERS; TIER II WATERSHEDS; IMPAIRED WATERS; STREAM PROTECTION ZONES; AND STORMWATER MANAGEMENT (SWM) FACILITIES.

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

DO 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!



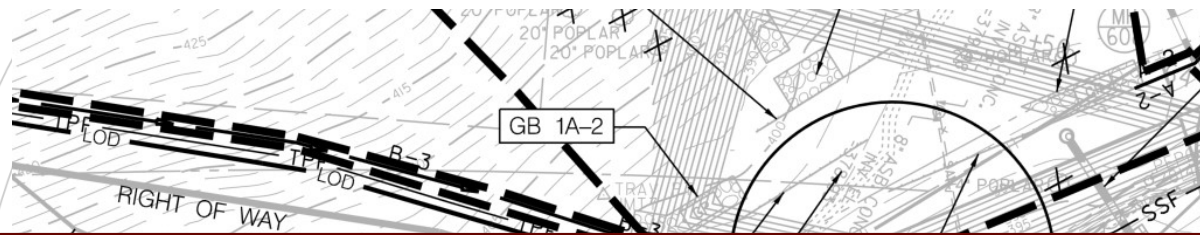
NOT NEEDED IN SEQUENCE!



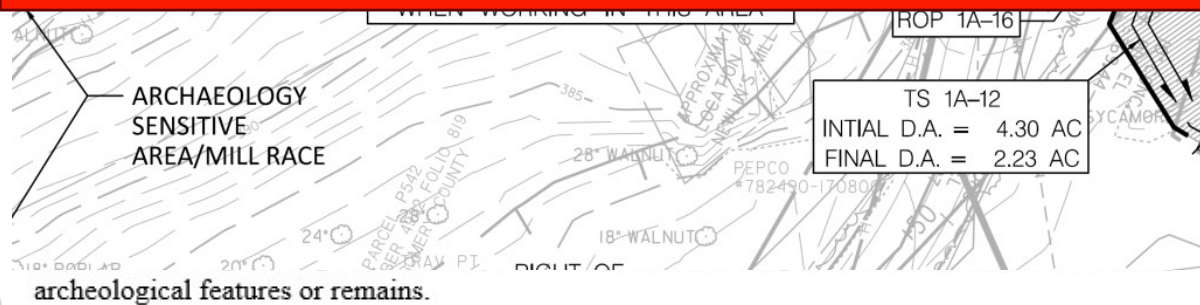
HAZMAT and Contaminated Soils

- 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

**CATEGORY 100
PRELIMINARY**



NOT NEEDED IN SEQUENCE!



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:

⑩ Storm Drain Construction

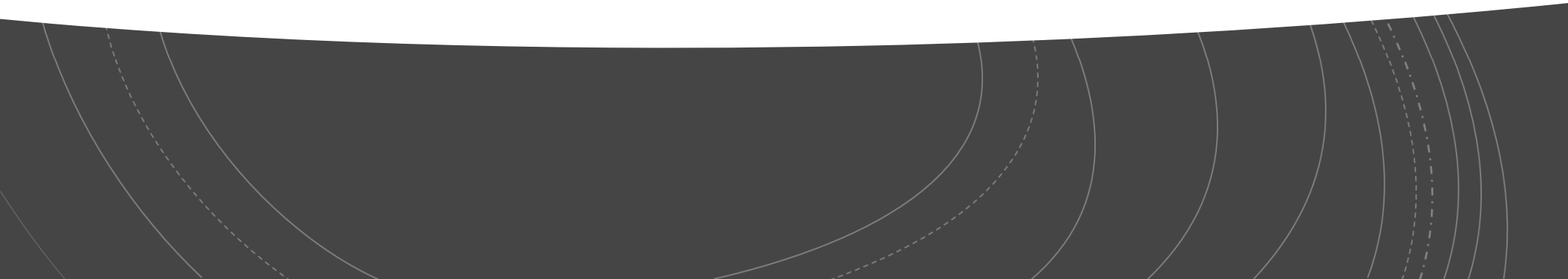
⑩ WHEN CONSTRUCTING STORM DRAIN SYSTEMS,
ENSURE POSITIVE FLOW IS MAINTAINED

⑩ Define NOAA 3-day dry weather forecast

⑩ 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!**

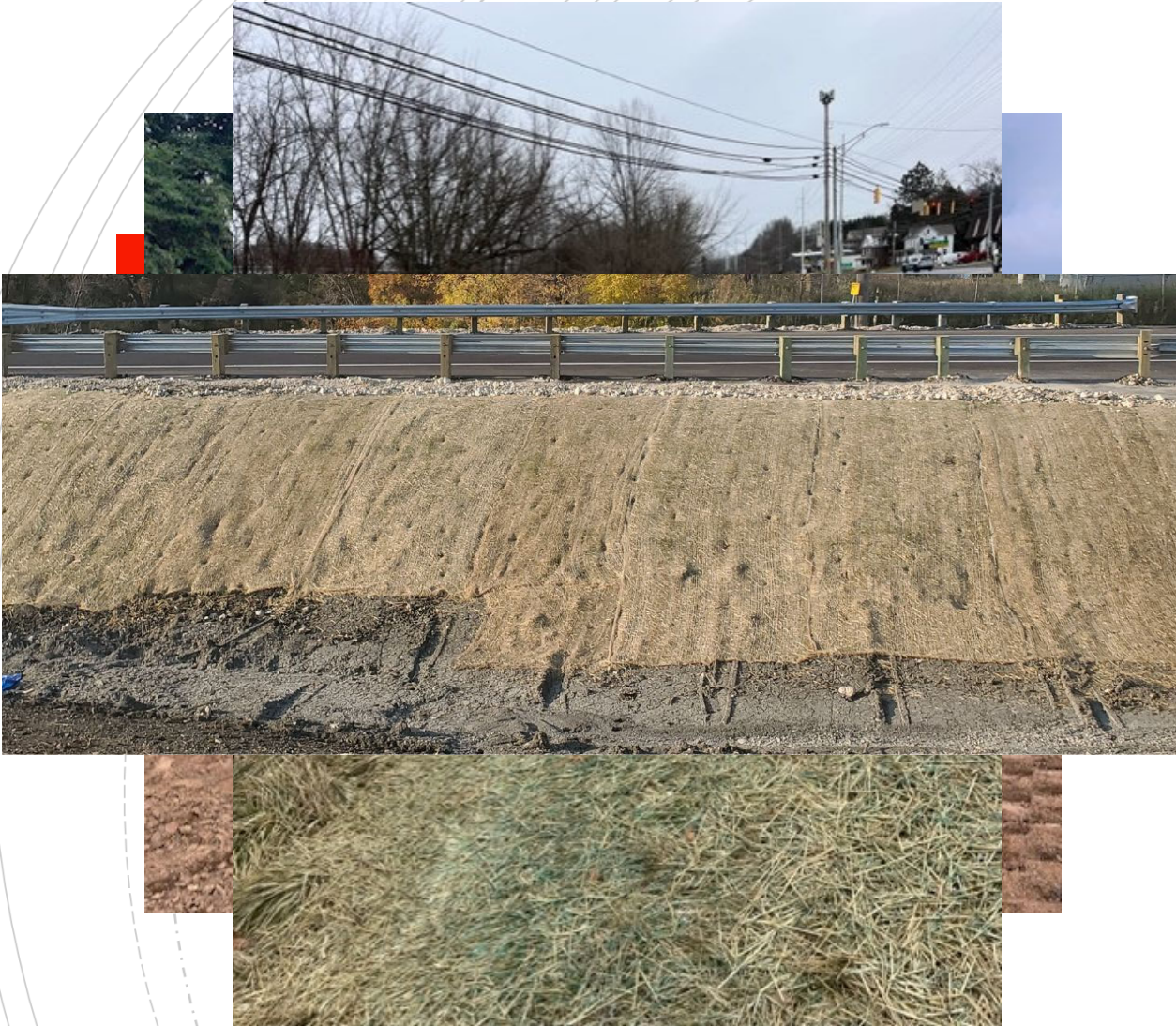
TEMPORARY STABILIZATION

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

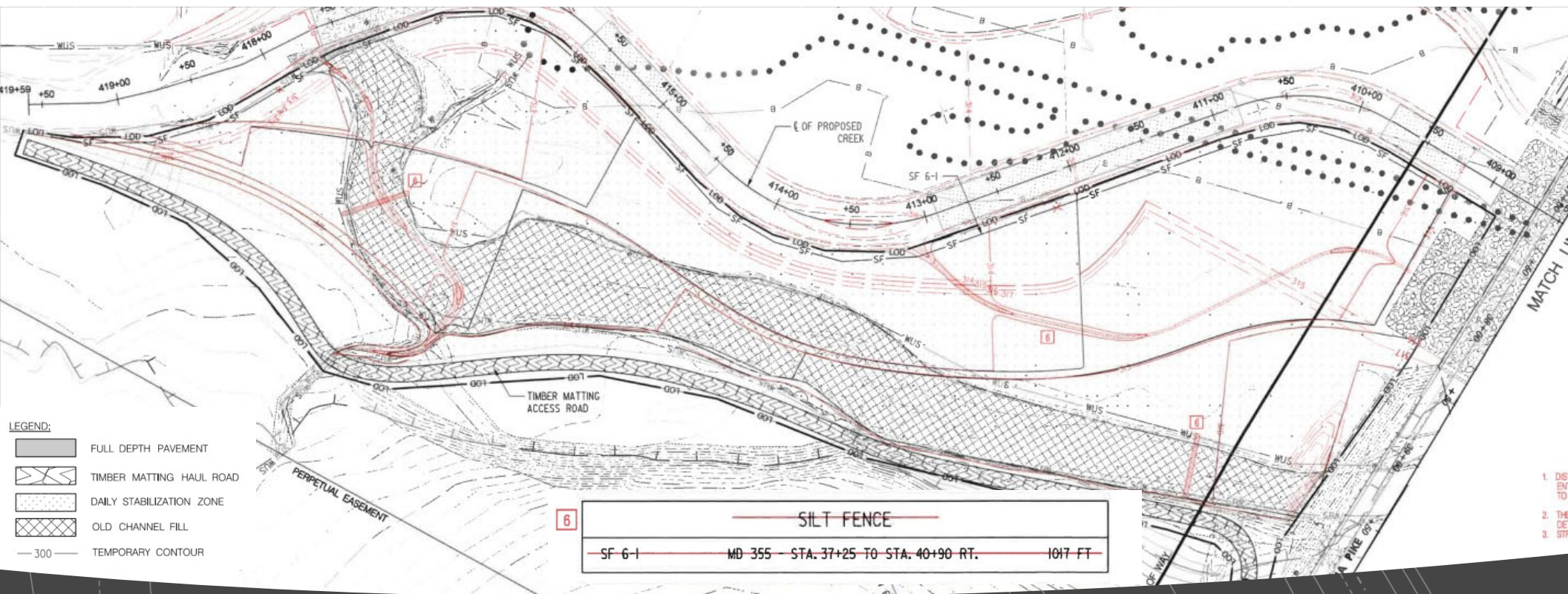
- Used at end of construction within a given work DAY
 - Establishes final landscaped condition
 - NO additional E&SC measures needed in these areas. Final planting is installed at the end of the day, rendering them "stable".
- ⑩ Include the following note on the plans:
- PERMANENTLY STABILIZE AREAS 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.



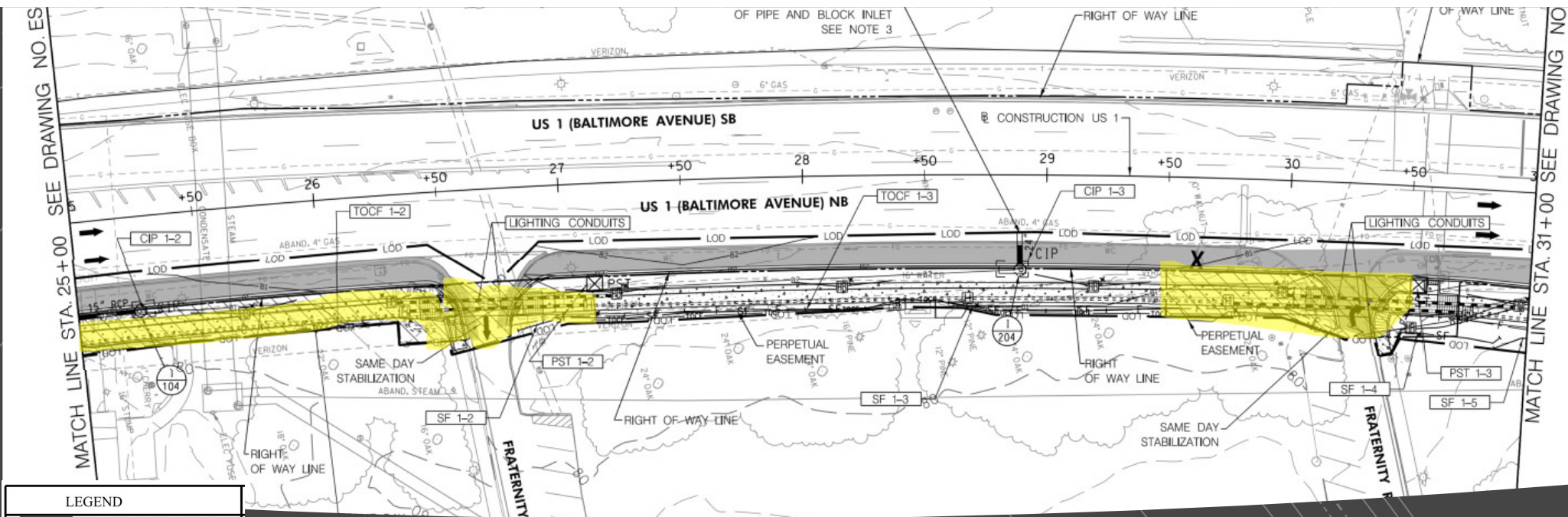
Is there a size limit for same day stabilization areas?



SAME DAY STABILIZATION

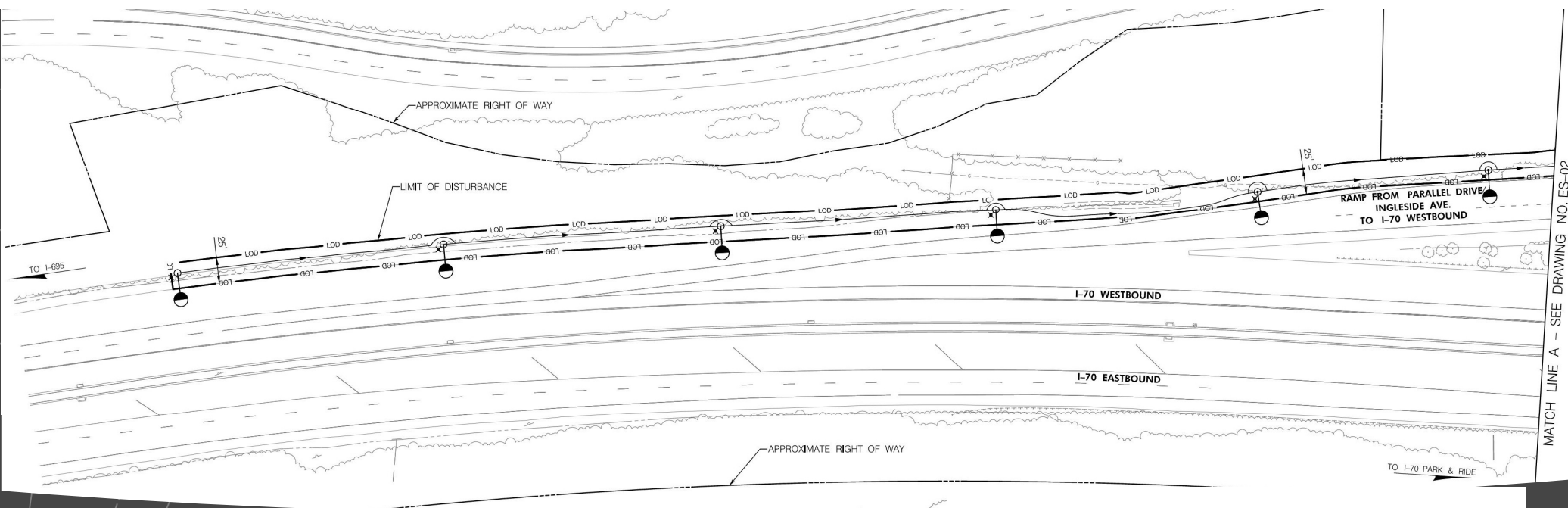


SAME DAY
STABILIZATION



LEGEND	
	FULL DEPTH RECONSTRUCTION
	PROPOSED CONCRETE SIDEWALK / BUS PAD
	REMOVAL OF CONCRETE / ASPHALT PAVEMENT
	PROPOSED COMMERCIAL DRIVEWAY
	ASPHALT PAVEMENT FOR DRIVEWAY TIE-IN
	SAME DAY STABILIZATION AREA (DEFINED WITHIN LOD LINE)
	REMOVAL OF EX. PIPE
	ABANDONMENT OF EX. PIPE

SAME DAY
STABILIZATION



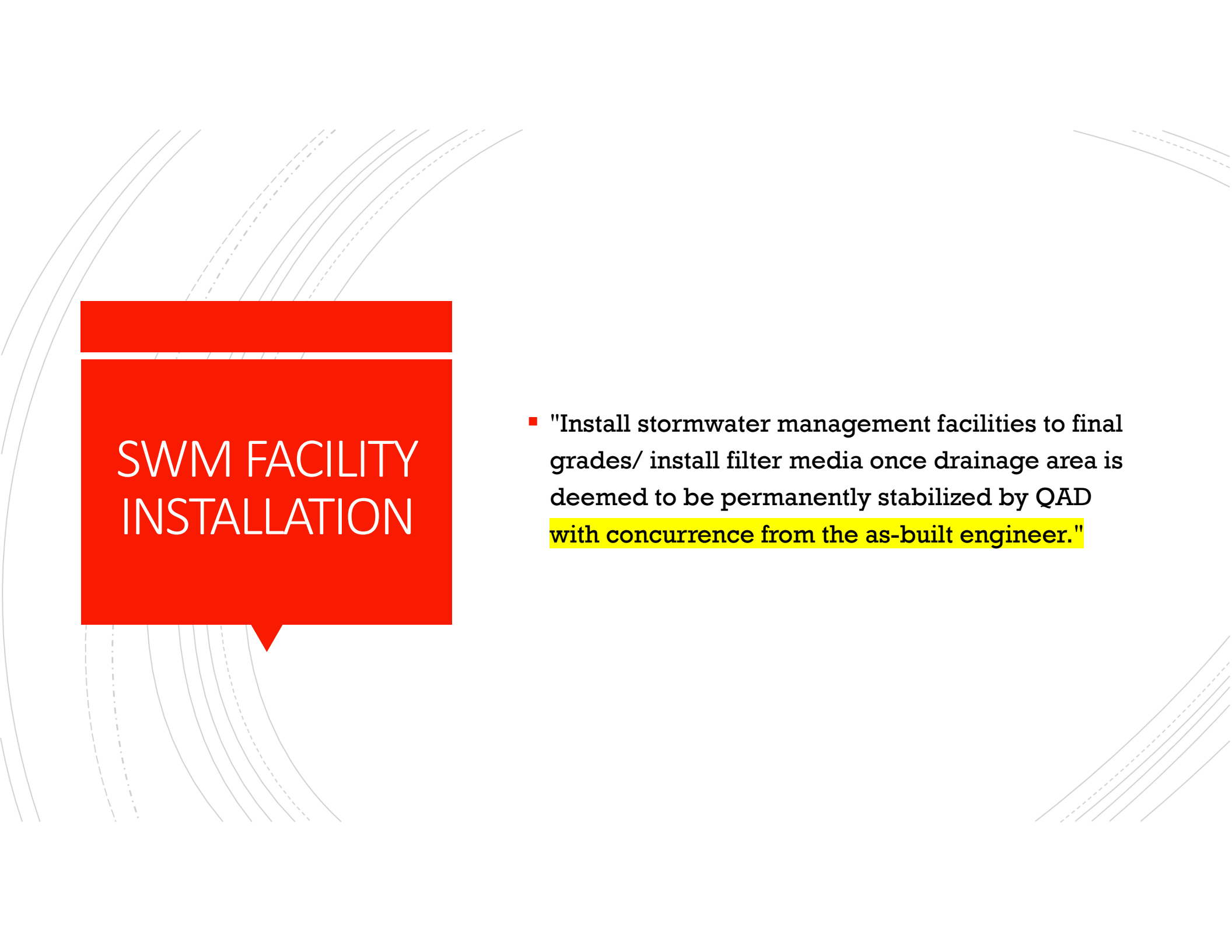
SAME DAY STABILIZATION

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)

The background of the slide features several sets of thin, curved lines in a light gray color, some solid and some dashed, creating a sense of motion or flow. A large red speech bubble is positioned on the left side, containing the title text.

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!



The background features a series of concentric circles in light gray, some solid and some dashed, creating a ripple effect. A large, solid red oval is centered on the page, containing the main text. A dark gray, curved shape is positioned to the left of the red oval, partially overlapping it.

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"**

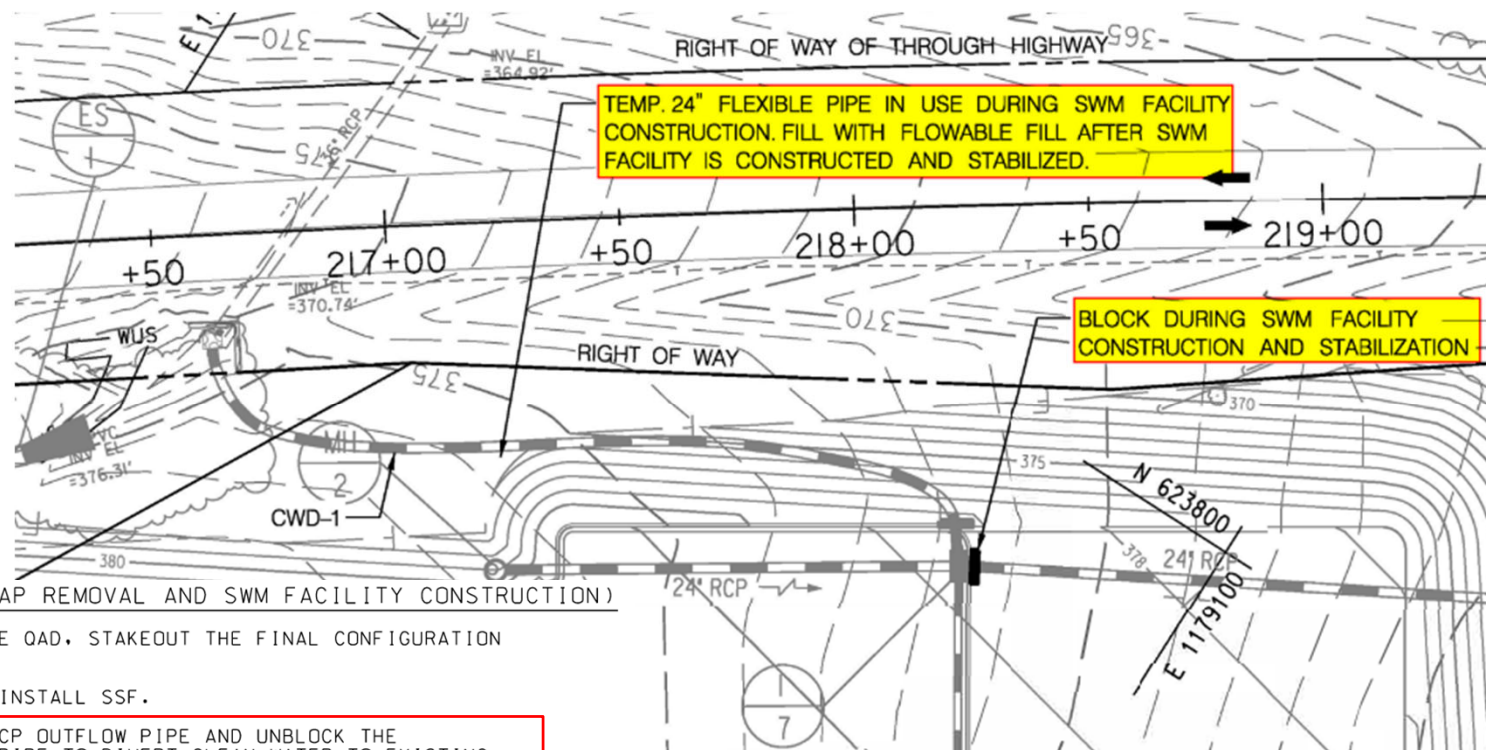


FINAL CONFIGURATION (TRAP REMOVAL AND SWM FACILITY CONSTRUCTION)

1. WITH THE APPROVAL OF THE QAD, STAKEOUT THE FINAL CONFIGURATION LOD.
2. CLEAR AND GRUB FOR AND INSTALL SSF.
3. AT 1-7, 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 PERMANENTLY 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 1-7, 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

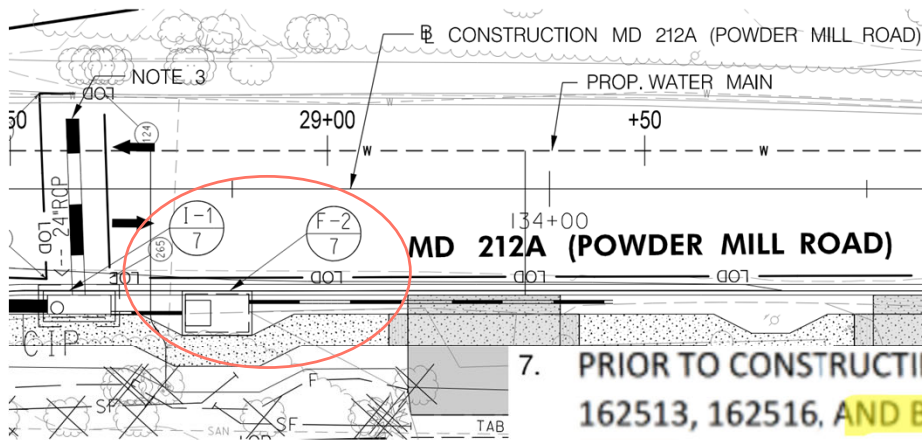


FINAL CONFIGURATION (TRAP REMOVAL AND SWM FACILITY CONSTRUCTION)

1. WITH THE APPROVAL OF THE OAD, 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).

**SIMPLIFICATION
OPPORTUNITY:**

Temporary storm drain system
Plan Notes



7. 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.

SIMPLIFICATION OPPORTUNITY:

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

SIMPLIFICATION OPPORTUNITY: PG1065184

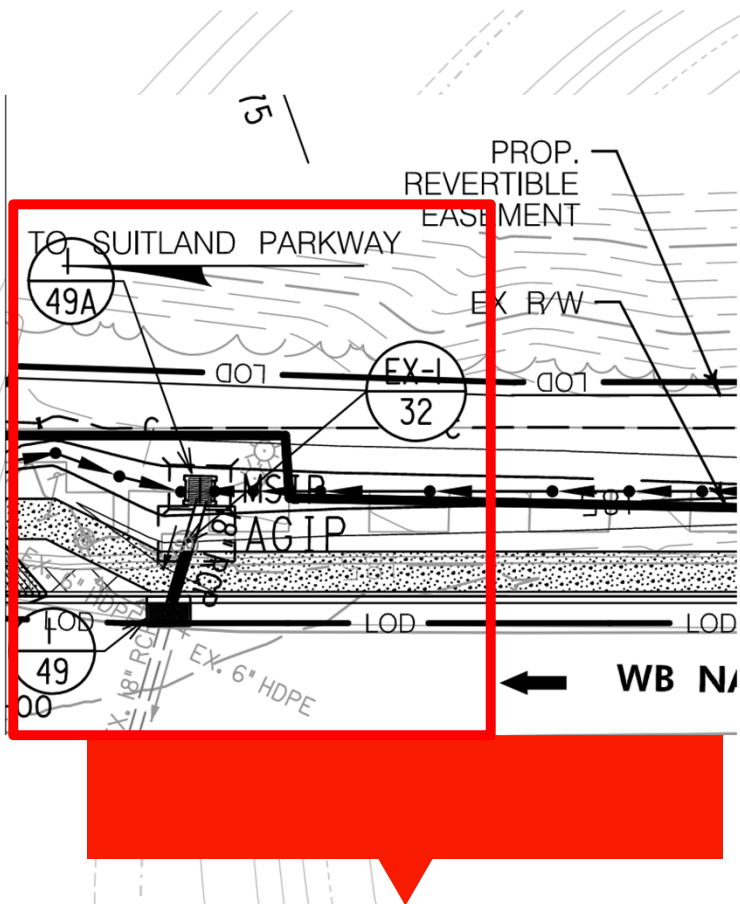
SEQUENCE OF CONSTRUCTION

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, 162516, 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.

NOTES:

- ~~1. SEE SHEET ESN-2 FOR SEQUENCE OF CONSTRUCTION.~~
2. IMMEDIATELY STABILIZE AREAS UPSLOPE OF DIVERSION FENCE AFTER INSTALLATION.
3. BLOCK END OF PIPE UNTIL PHASE 2 CONSTRUCTION.
SEE DETAIL 1 ON SHEET ES1-01
- ~~4. SEE DRAWINGS NO. TCP-01 THROUGH TCP-39 FOR
MAINTENANCE OF TRAFFIC PLANS.~~
5. PROVIDE RIPRAP OUTFALL PROTECTION BETWEEN TEMPORARY ASPHALT BERM AND INLET.
- ~~6. PORTABLE SEDIMENT TANK (PST) SHOULD BE USED IN
THE EVENT DEWATERING BECOMES NECESSARY.~~

SIMPLIFICATION OPPORTUNITY:



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:**

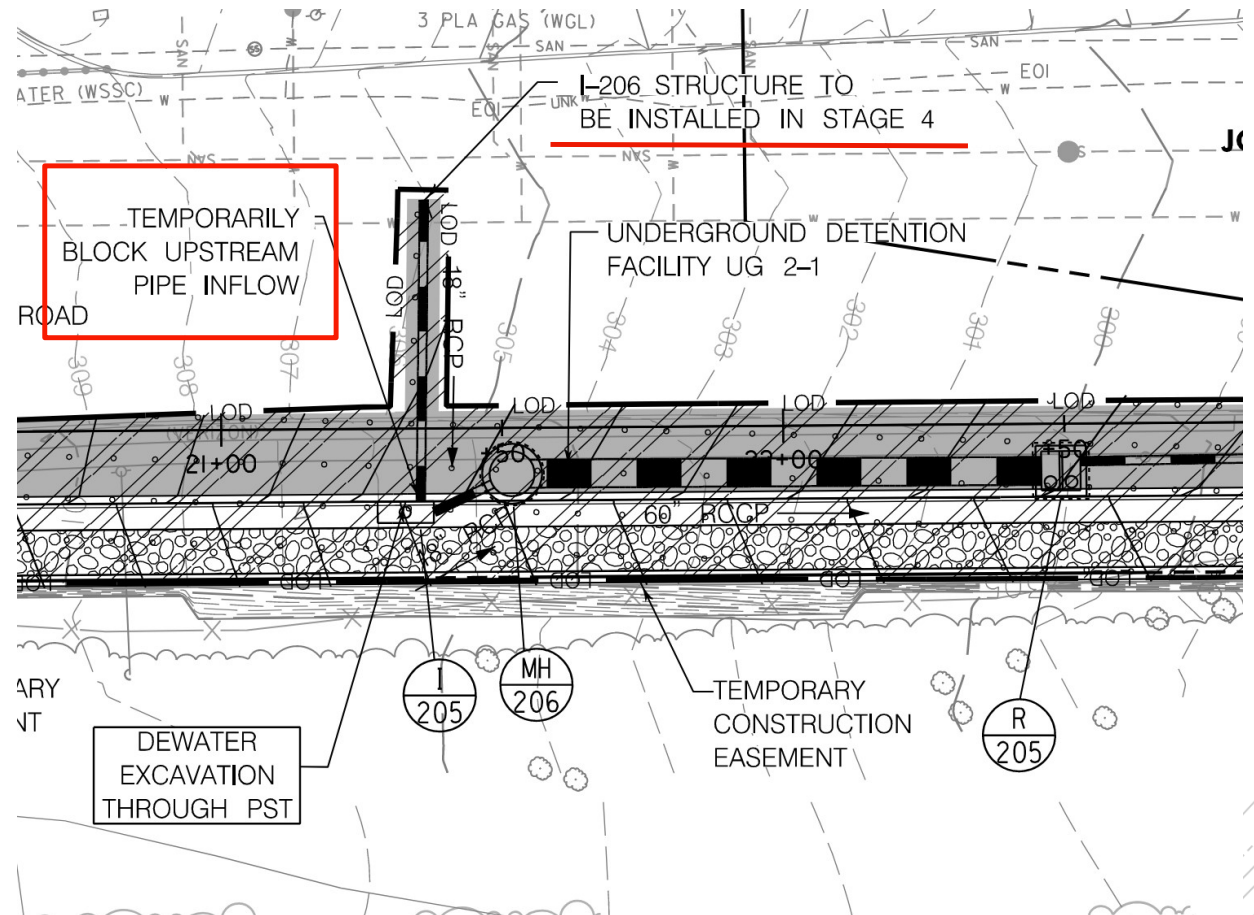
Locations where detailed notes on
specific plan sheets preferred
instead of detailed SOC instruction

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**

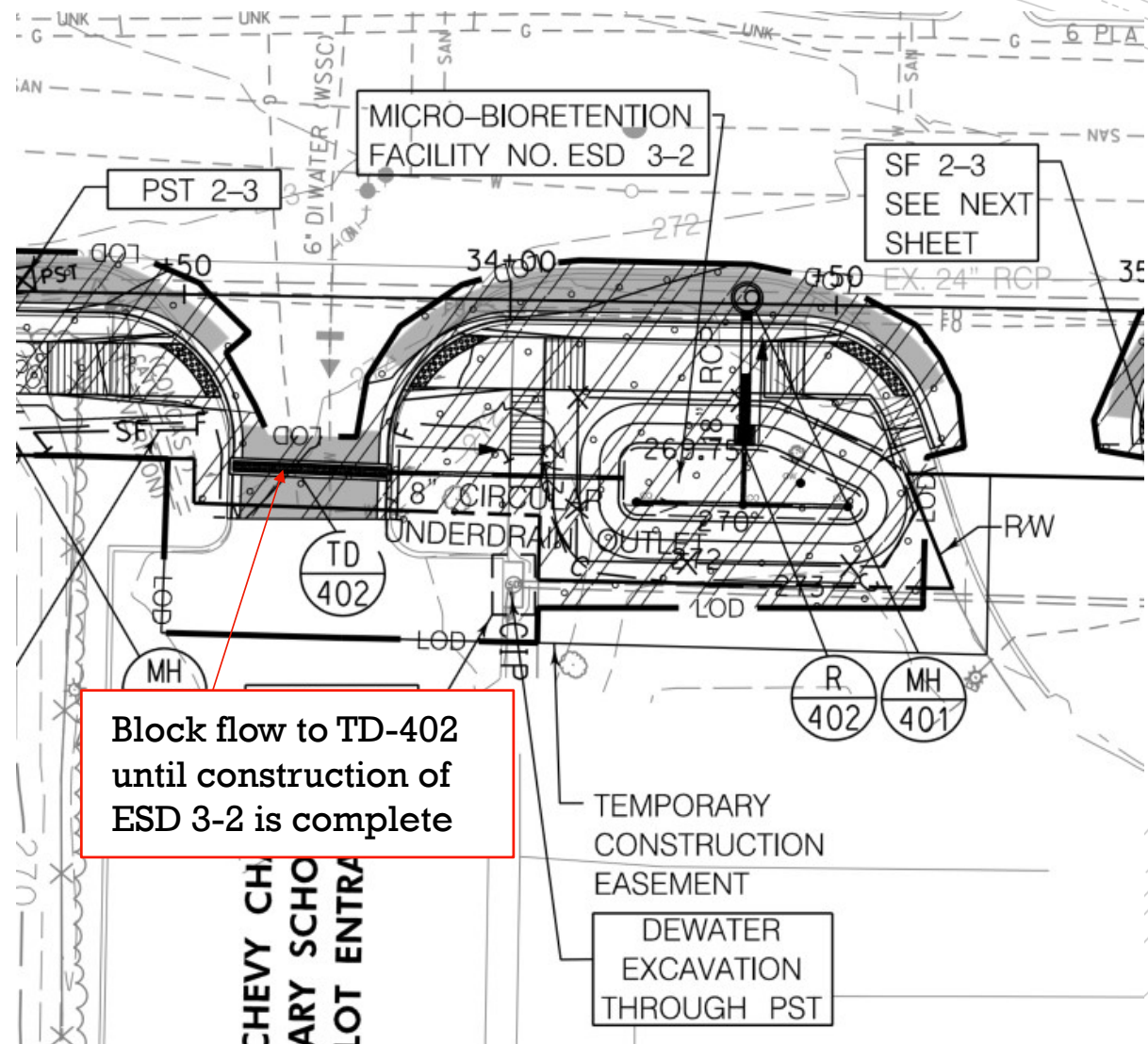


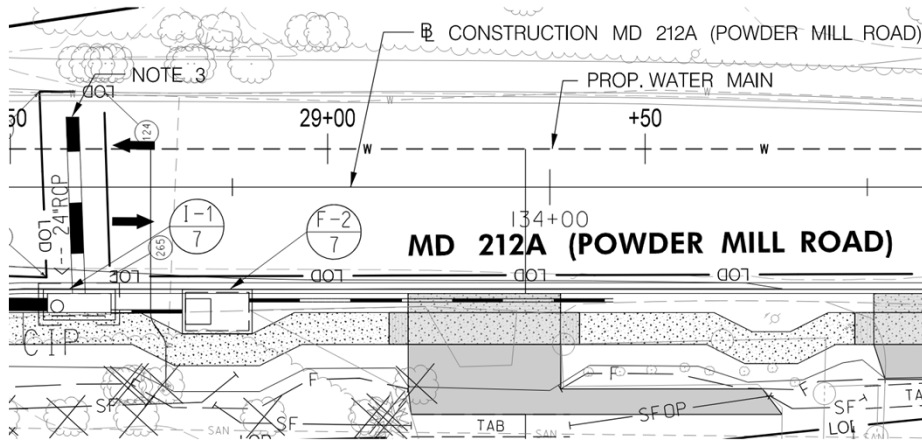
Could these "Constraints" be Plan Notes?

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.~~
 - 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**





NOTES:

1. SEE SHEET ESN-2 FOR SEQUENCE OF CONSTRUCTION.
2. IMMEDIATELY STABILIZE AREAS UPSLOPE OF EARTH DIKES AND DIVERSION FENCE AFTER INSTALLATION.
3. BLOCK END OF PIPE UNTIL PHASE 2 CONSTRUCTION. SEE DETAIL 1 ON SHEET ES1-01
4. SEE DRAWINGS NO. TCP-01 THROUGH TCP-39 FOR MAINTENANCE OF TRAFFIC PLANS.
5. PORTABLE SEDIMENT TANK (PST) SHALL BE USED IN THE EVENT DEWATERING BECOMES NECESSARY.

6. BLOCK DISCHARGE OF PIPE UNTIL ALL AREAS UPSTREAM

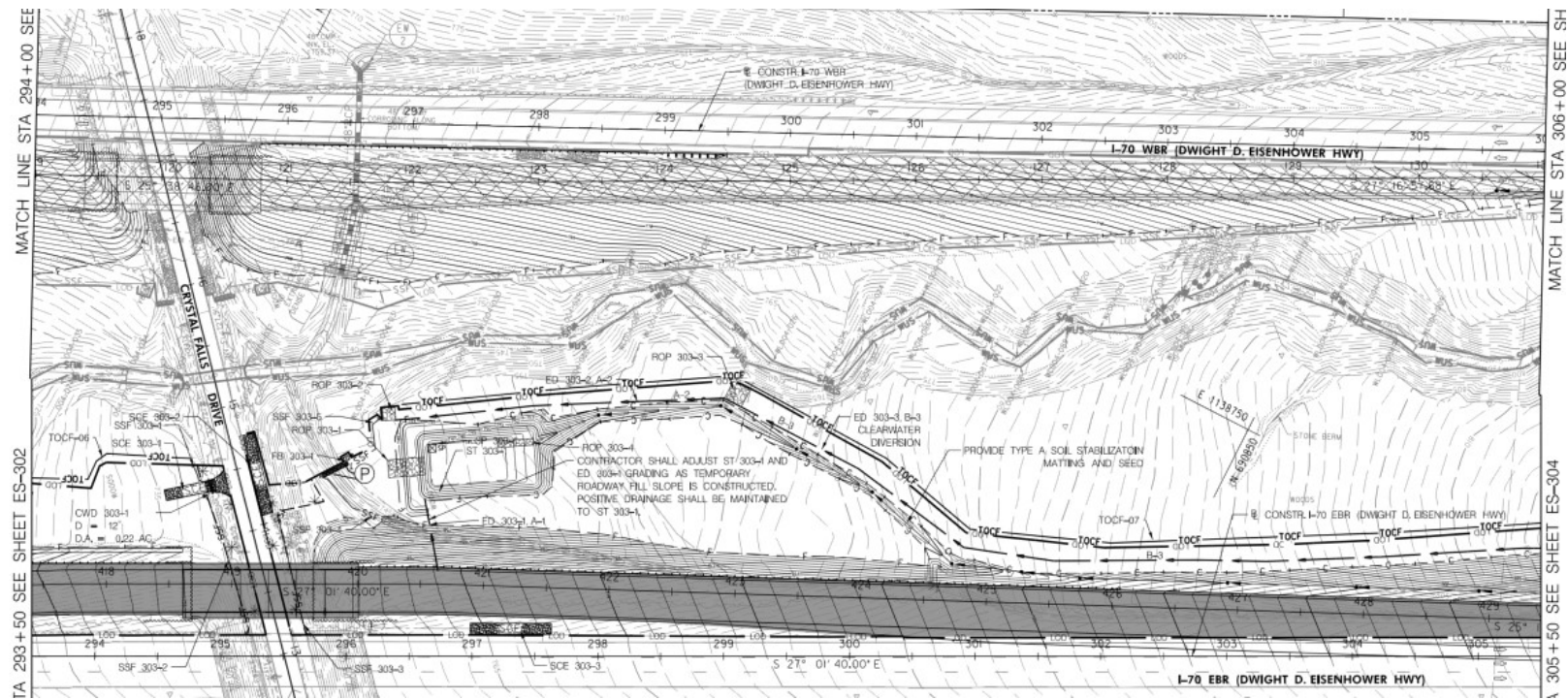
SIMPLIFICATION OPPORTUNITY:

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

BREAKOUT SESSIONS:

Not sure where to go? Look at your badge!

AFTER LUNCH GO TO BREAKOUT ROOMS

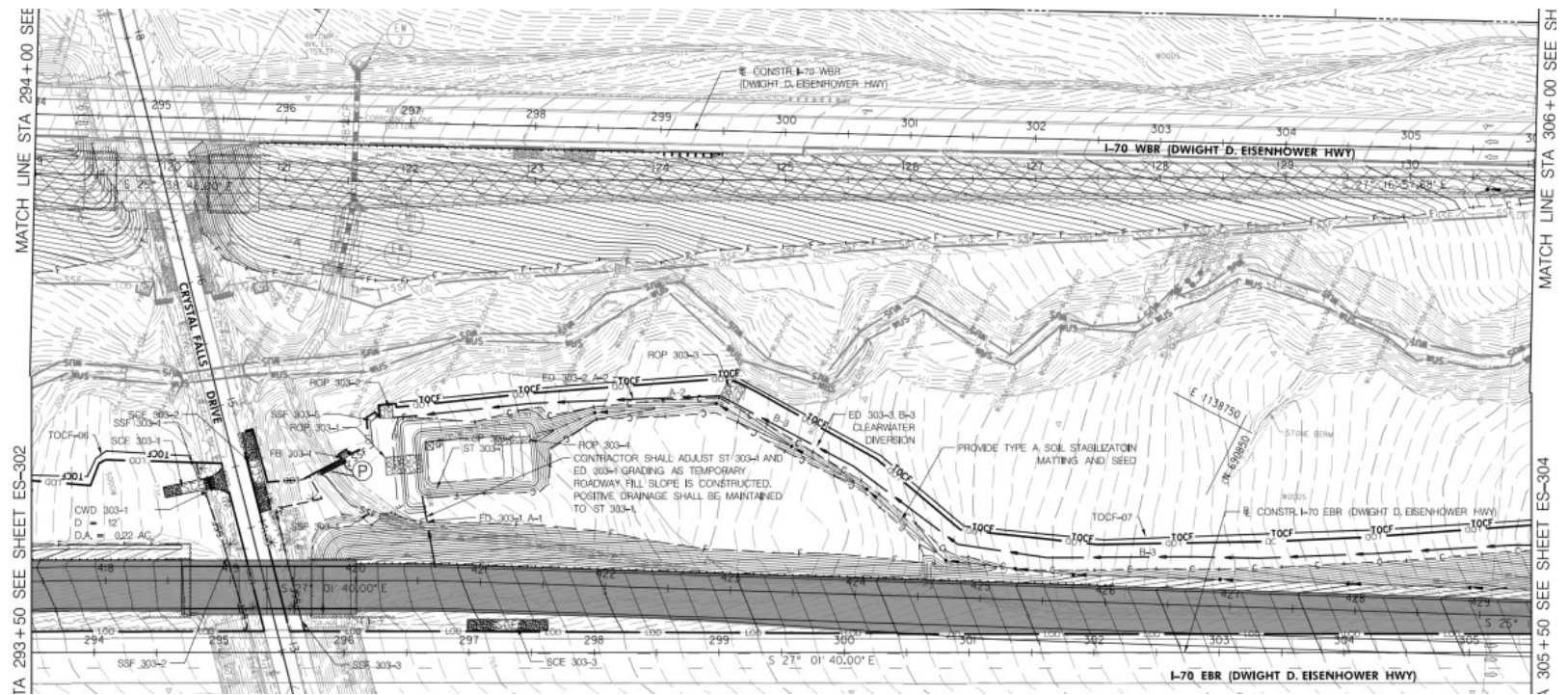


SIMPLIFICATION ISSUE:

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.

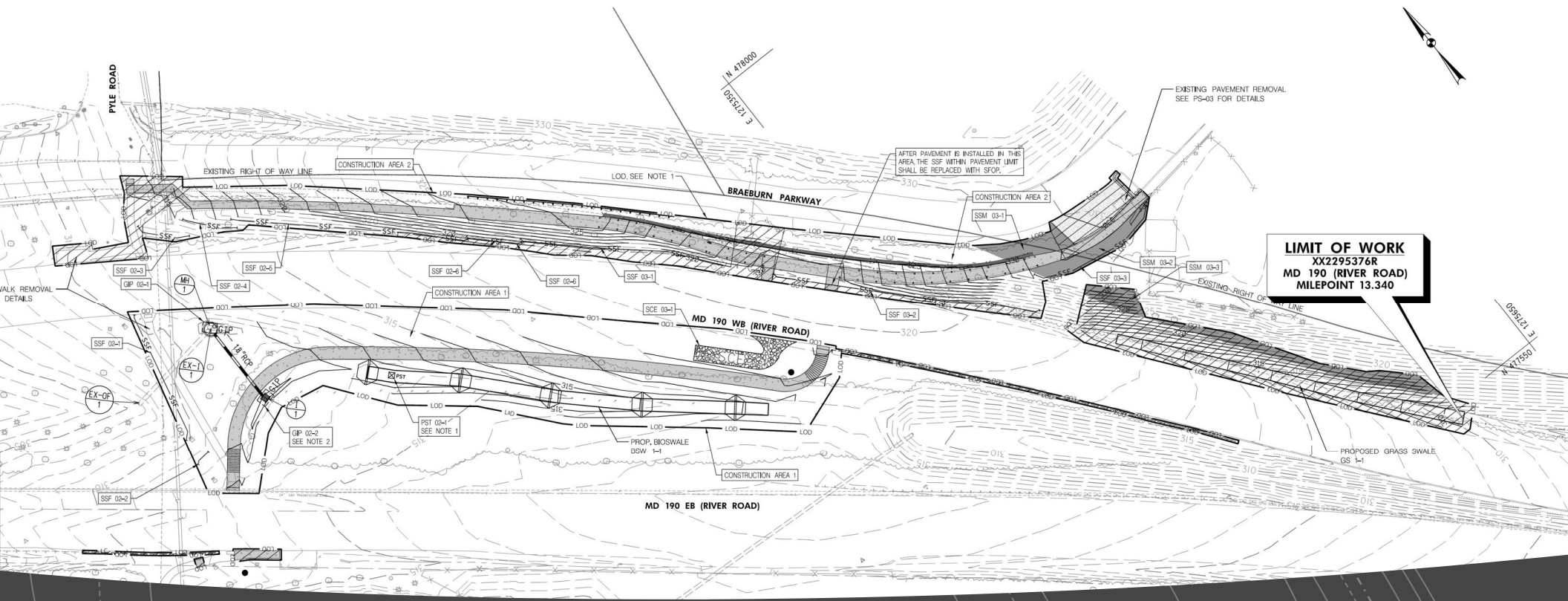
4. WITH APPROVAL FROM THE ENGINEER AND SHA QAD, CONTRACTOR MAY CONSTRUCT EASTBOUND AND WESTBOUND TEMPORARY ROADWAYS CONCURRENTLY. ALL REQUIRED EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED AND APPROVED BY SHA QAD AS IN CONCURRENT GRADING OPERATIONS.



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 EROSION 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 PRUNING.
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 PRUNING.
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).
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.

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 EROSION 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 EROSION 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 PRUNING.~~
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 PRUNING.~~
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).
- 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, 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.
- 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).
- 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 ERODIVE 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 CONSTRUCTION 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.

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.

Change to "as specified in contract documents"

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

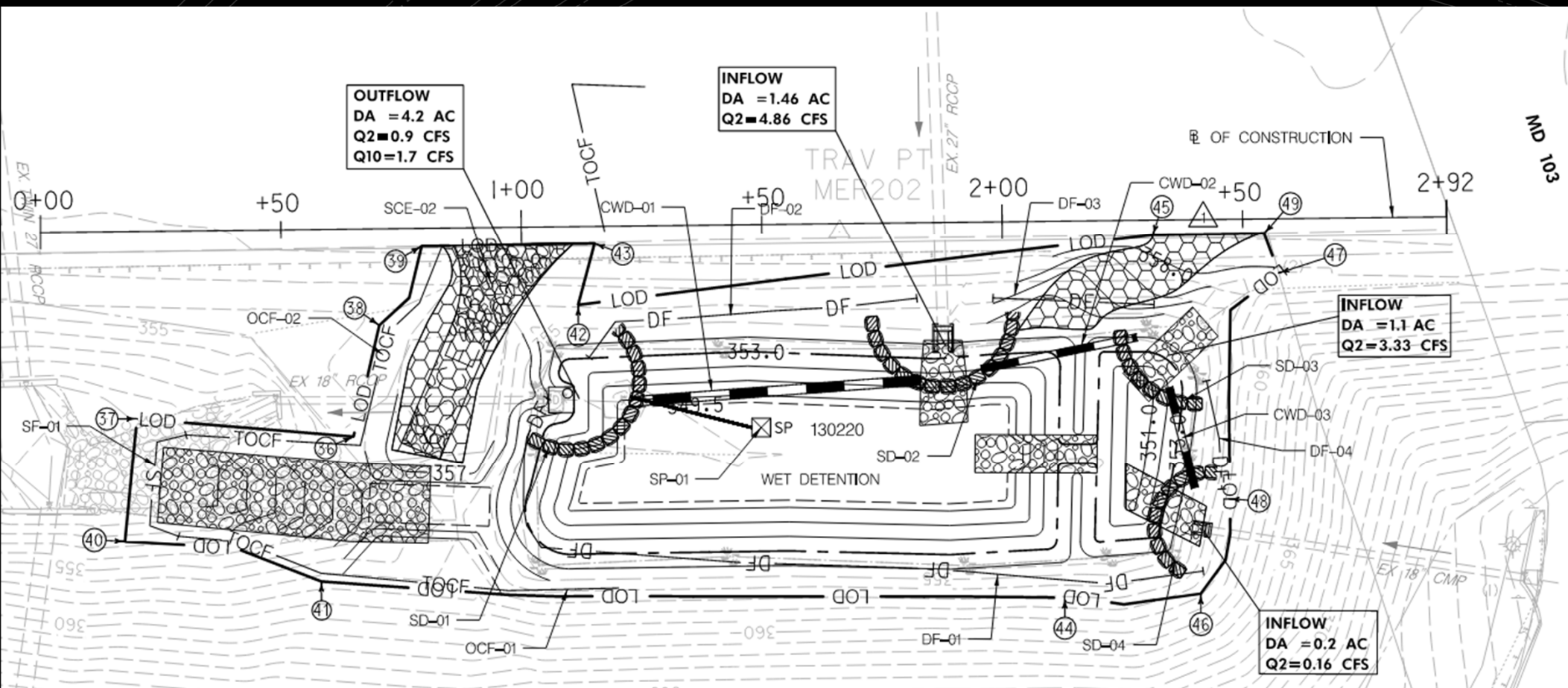
- 1. THE CONTRACTOR SHALL NOTIFY SHA'S QUALITY ASSURANCE DIVISION PER GENERAL NOTE 2
- 2. STAKEOUT LOD AND INSTALL TOCF. THE CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLANS FOR LIMITS OF TOCF.

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

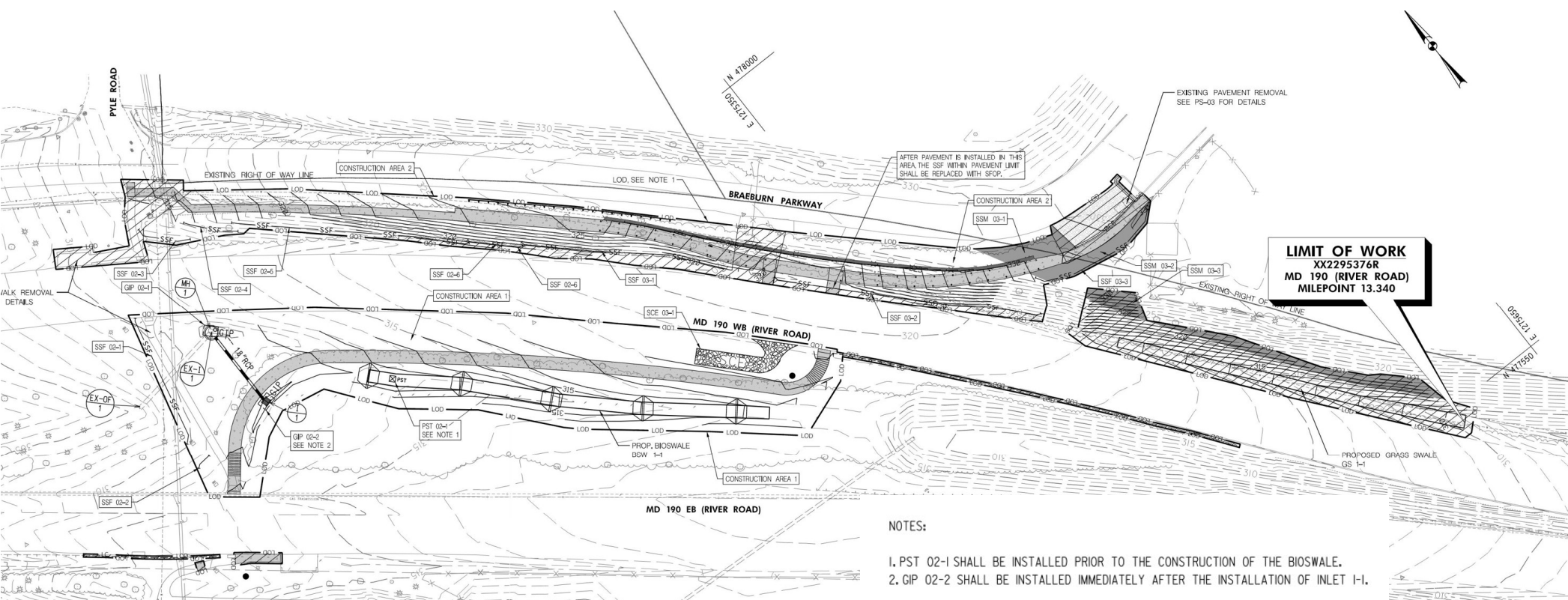
- 1. INSTALL ESC IN CONSTRUCTION AREA 1
- 2. PERFORM PROPOSED CONSTRUCTION AS SPECIFIED IN CONSTRUCTION DOCUMENTS.
- 3. PRIOR TO CONSTRUCTING BSW 1-1, PERMANENTLY STABILIZE ALL DISTURBED AREAS DRAINING TO FACILITY. WITH QAD APPROVAL, CONSTRUCT AND PERMANENTLY STABILIZE BSW 1-1.
- 4. PERMANENTLY STABILIZE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



Example Project – MD 190 Intersection Improvements

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 BE 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 RIPRAP 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" X 48" 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" X 48" W20-7a FLAGGER SIGN IN COMBINATION WITH THE 30" X 24" 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 RIPRAP 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 MDT 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" X 48" 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" X 48" W20-7a FLAGGER SIGN IN COMBINATION WITH THE 30" X 24" 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.~~
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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 RIPRAP AS SHOWN ON THE CONSTRUCTION PLAN.
13. REMOVE A PORTION OF EXISTING PRINCIPAL SPILLWAY AND OLD RISER STRUCTURE.
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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.
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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.
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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.
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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.
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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:

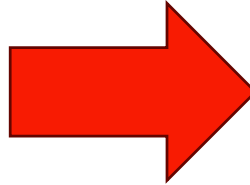
1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY, INSTALL, & MAINTAIN ALL TEMPORARY TRAFFIC CONTROL EQUIPMENT FOR THE DURATION OF THE CONTRACT. ALL MAINTENANCE OF TRAFFIC DEVICES AND INSTALLATION OF THE DEVICES WILL BE INSPECTED ON A ROUTINE BASIS BY THE CONTRACTOR'S MAINTENANCE OF TRAFFIC MANAGER. THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES PROMPTLY.
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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.
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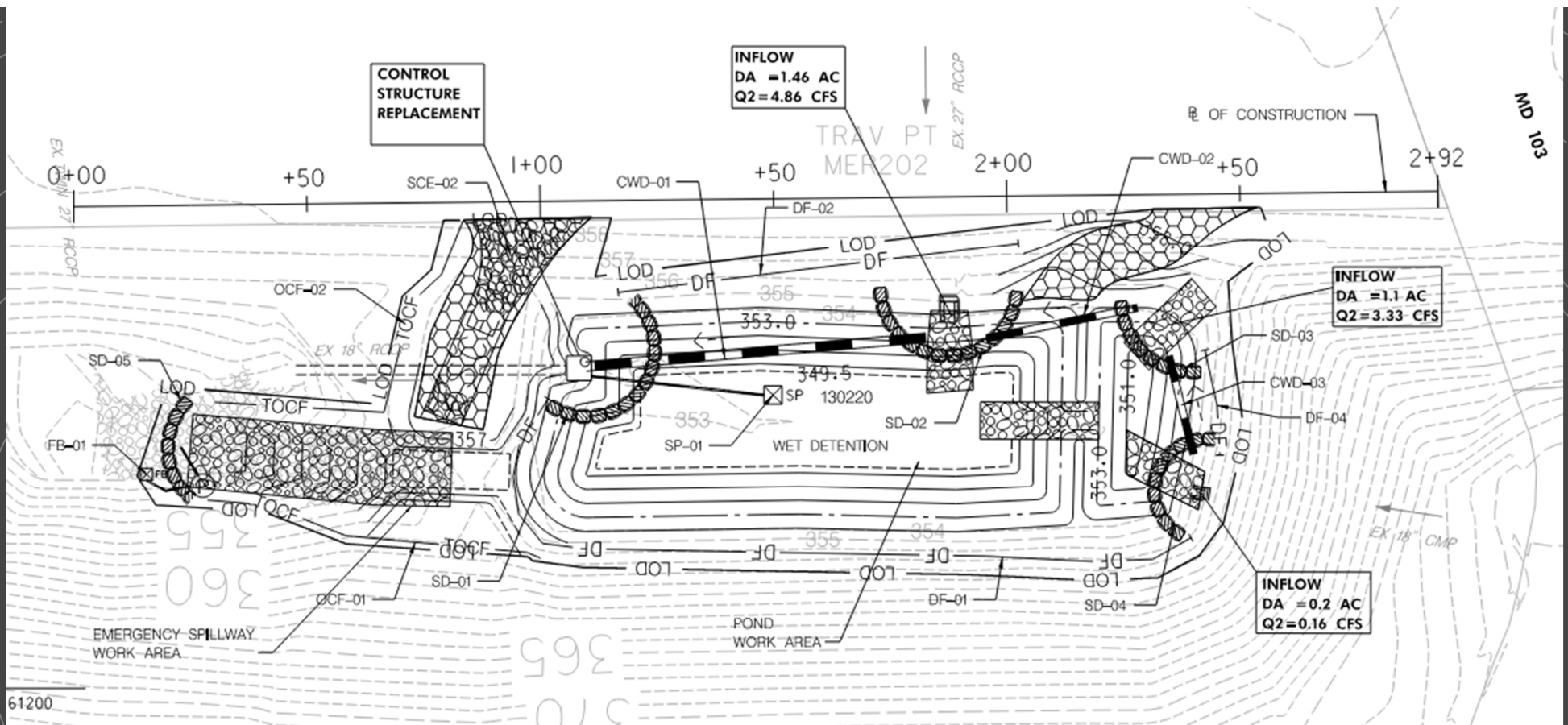
REVISED FLEXIBLE SEQUENCE

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

A red speech bubble with a white border is located on the right side of the image. It contains the text "Questions & Answers" in a white, sans-serif font. The bubble has a small tail pointing downwards and to the left. The background of the slide features faint, light gray curved lines.