# NOTES:

## FOUNDATION AND BACKFILL

1. Backfill to the outside of the walls with granular non-cohesive material. Backfill in horizontal layers not exceeding 4 inches in thickness before compaction.

2. Wall must be securely braced before backfilling. Bracing may be removed after top slab and tie wall or alternative resistance to sliding is installed.

## CONCRETE

1. Concrete shall conform to the requirements of Construction Specification MI-158, Reinforced Concrete.

2. Construction joints shall be left rough and wetted before concrete placement.

## REINFORCING STEEL

1. Steel reinforcement shall conform to the requirements of Construction Specification MI-158. Grade 60 reinforcing steel is required.

2. Specified bar dimensions are measured to outside edge of all bends.

3. Radius of bend equals 3 bar diameters.

4. Minimum Lap Splice: 20 in. for #5
   24 in. for #6

## DESIGN ASSUMPTIONS

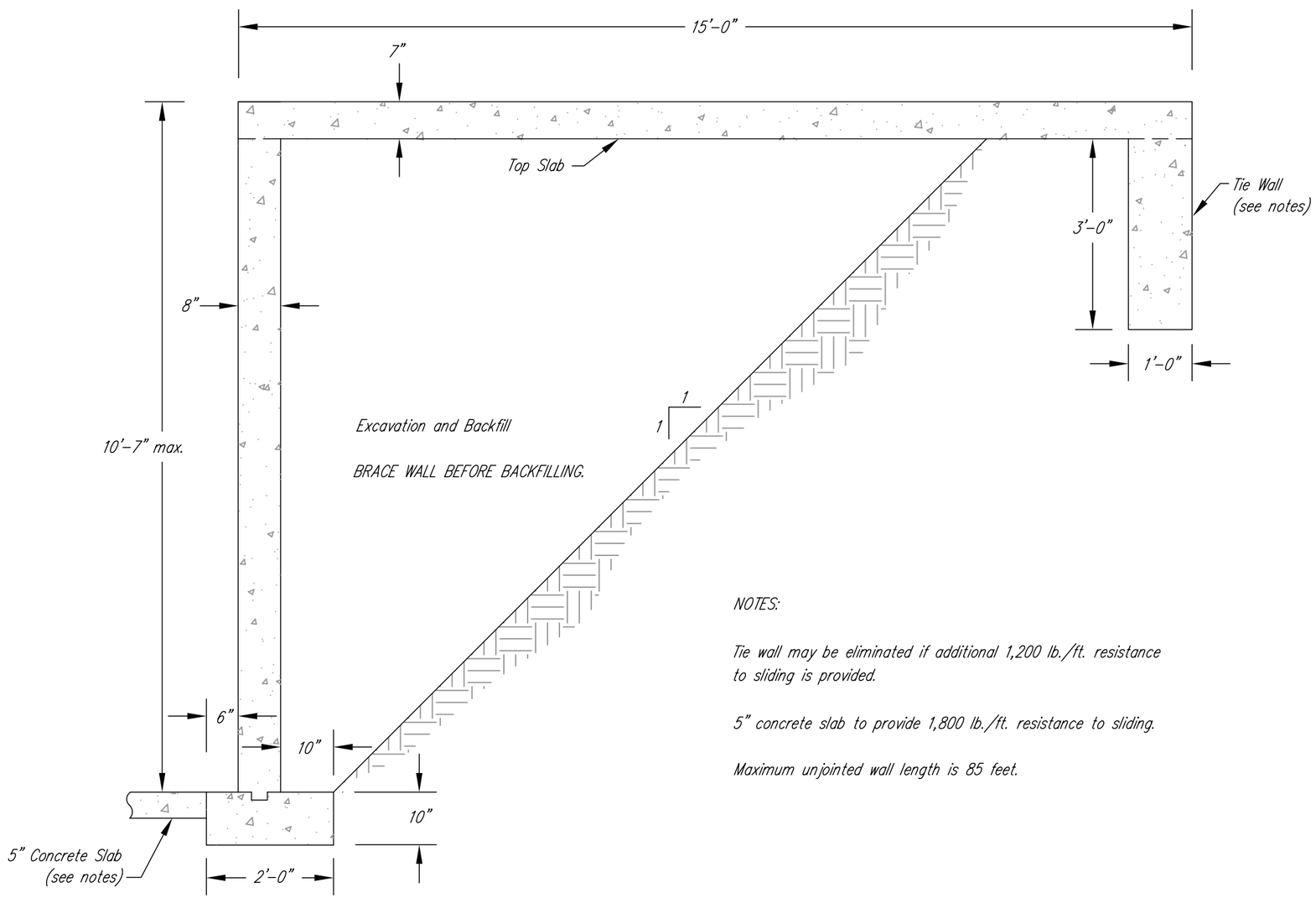
1. Wall backfill side loading: 50 psf/ft. depth + surcharge (12,000 lb. tractor).

2. Holding area side loading: 65 psf/ft. depth.

3. Structure drainage condition: Full drainage behind wall.

4. Concrete: $f_c$ = 3,500 psi, Reinforcing steel: $f_s$ = 60 ksi.

5. Minimum soil bearing capacity : 2000 psf.




NOTES:

Tie wall may be eliminated if additional 1,200 lb./ft. resistance to sliding is provided.

5" concrete slab to provide 1,800 lb./ft. resistance to sliding.

Maximum unjointed wall length is 85 feet.

| MICHIGAN ENGINEERING STANDARD DRAWING | |
|---|---|
| FILE NAME MI-645-B 1-07.dwg | |
| STANDARD DWG. NO. MI-645-B | |
| DATE 1-07 | SHEET 1 OF 2 |

Dimensions in inches or feet-inches

NOT TO SCALE

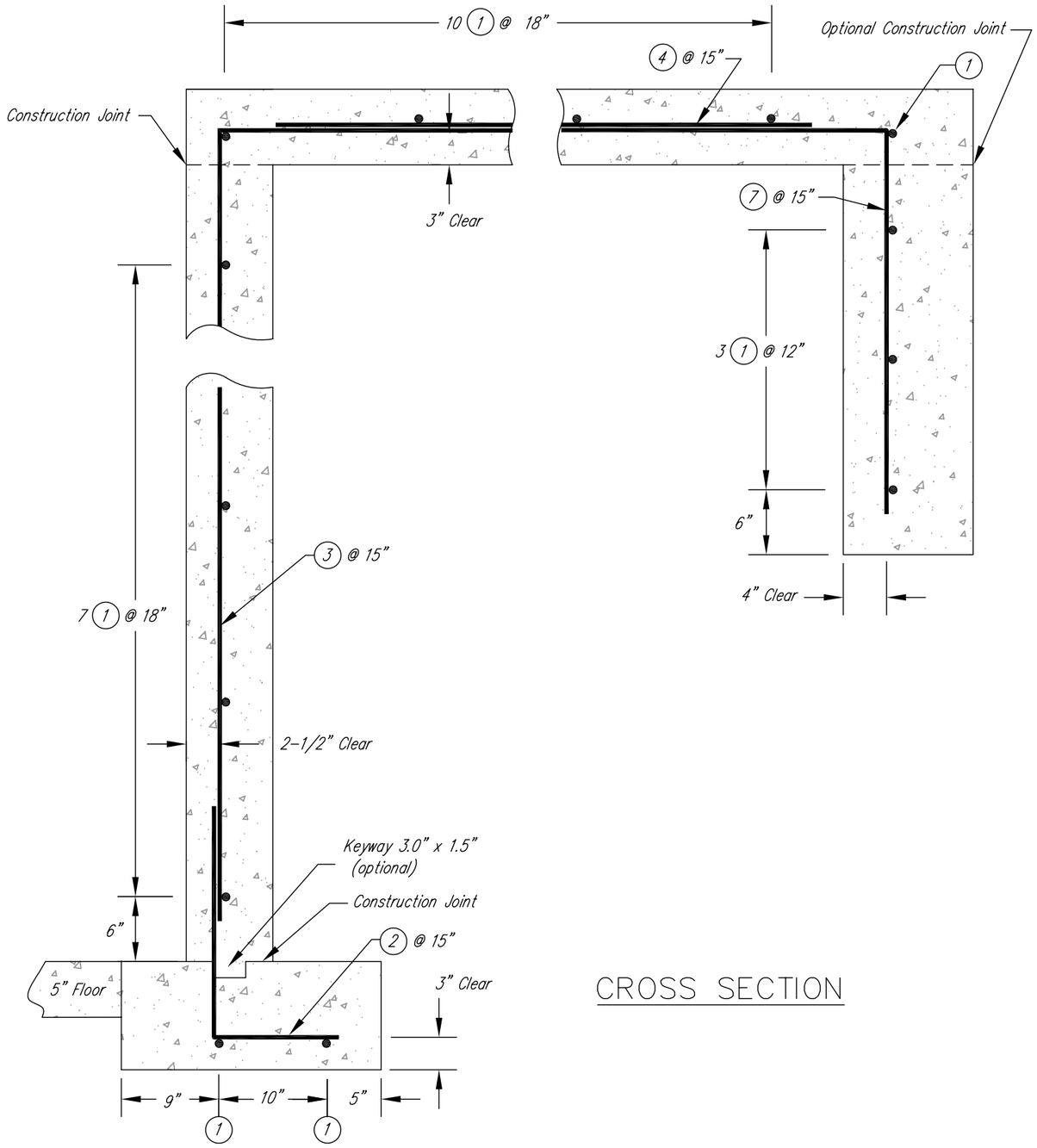
Date
Designed
Drawn
Checked
Approved

10 FOOT REINFORCED CONCRETE TIE BACK WALL

Co., Michigan
Township, T. -R. , Sec.

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File Name
Drawing Name
Sheet of



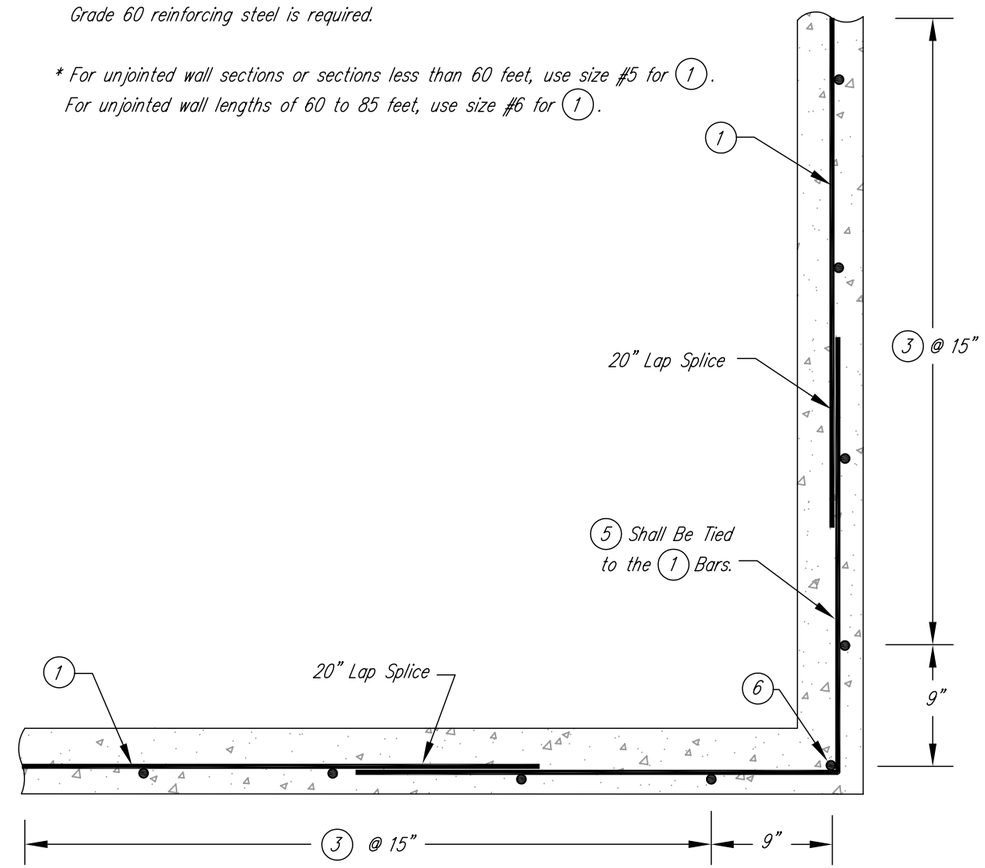

CROSS SECTION

## BAR SCHEDULE

| MARK | SIZE | QUANTITY | LENGTH | TOTAL LENGTH | TYPE | B | C | LOCATION |
|---|---|---|---|---|---|---|---|---|
| 1 | #5* | | | | 1 | | | Footing/wall/slab |
| 2 | #5 | | 3'-9" | | 21 | 2'-9" | 1'-0" | Wall/slab |
| 3 | #5 | | 9'-0" | | 21 | 7'-0" | 2'-0" | Wall, vertical |
| 4 | #5 | | 13'-6" | | 1 | | | Slab |
| 5 | #5 | | 6'-0" | | 21 | 3'-0" | 3'-0" | Wall corner |
| 6 | #5 | | 8'-0" | | 1 | | | Wall Corner Tie Bar |
| 7 | #5 | | 5'-0" | | 21 | 3'-0" | 2'-0" | Tie wall |

Steel reinforcement shall conform to the requirements of Construction Specification MI-158.
Grade 60 reinforcing steel is required.

* For unjointed wall sections or sections less than 60 feet, use size #5 for (1).
For unjointed wall lengths of 60 to 85 feet, use size #6 for (1).




CORNER DETAIL

Dimensions in inches or feet-inches

NOT TO SCALE

| MICHIGAN ENGINEERING STANDARD DRAWING | |
|---|---|
| FILE NAME MI-645-B 1-07.dwg | |
| STANDARD DWG. NO. MI-645-B | |
| DATE 1-07 | SHEET 2 OF 2 |

Date

Designed

Drawn

Checked

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10 FOOT REINFORCED CONCRETE TIE BACK WALL

Co., Michigan

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