

PLANNING COMMISSION STAFF EVALUATION – SECOND REVIEW

APPLICATION NO: 25-002A APPLICANT: Jesse Elsmore, Jardine Builders, LLC PROPERTY OWNER: Andrea Nielsen / John Kimball Jr & Virginia Francis PROPERTY ADDRESS: 139 West Main Street & 127 West Main Street PARCEL NUMBER: 01-050-0023 & 01-050-0024 PARCEL AREA: 01-050-0023 = .33 Acres / 01-050-0024 = 0.63 Acres (0.96 Acres) ZONE: Commercial Zone C-2 DATE: March 25, 2025

PLANNING COMMISSION MEETING: PLANNING COMMISSION ROLE: APPLICATION TYPE:

March 27, 2025 (Special Meeting) Recommending Body to City Council Site Plan Approval

NATURE OF REQUEST:

Permitted Use: Mixed Use Commercial.

CURRENT ZONING DISTRICT:

Commercial Zone C-2: The C-2 Downtown Mixed-Use Zone is designed to preserve the mixed-use nature and feel of downtown Hyrum, providing for office, commercial, and residential uses within a mixed-use setting. A major objective of the C-2 Downtown Mixed-Use Zone is to create aesthetically pleasing streetscapes with landscaping that buffers sidewalks from major vehicular traffic ways, landscape features, recreational amenities, and social gathering areas that promote a walkable community.

OVERVIEW:

The applicant would like to develop the 0.96 acres with two (2), two-story mixed-use buildings facing the streetscape on Main Street. Each main floor level of each building will be divided into two (2) north and south commercial units for a combined four (4) ground level commercial use units. The applicant provided potential uses (see attached Hyrum Market 1860 Scope Narrative) that include a mix of open conference, market space, demonstration kitchen, community events, home-school groups, classrooms and small training classrooms, farmer's or craft markets, non-profit organizations, and more. The upper level of each building will consist of six (6) short-term hotel style residential units in each building with single and double-bed units that will be accessible by a stairway inside each building and secured at main level doors to the exterior of the building.

UTILITIES: Existing Power, Sewer, Water, Irrigation servicing 127 West Main Street are for a Single-Family Residential Home. Upgrades will need to be built/installed.

STAFF COMMENTS:

Planning and Zoning:

- 1. The Planning Commission recommend site plan approval to the City Council based on the applicants compliance with staff evaluations and staff comments, applicant submittals, and any additional Planning Commission recommendations. The City Council can require revisions as necessary.
- 2. The dwelling unit(s) in each building engage the following code requirements to require a separate sewer lateral to each building for a total of two (2) sewer laterals:
 - a. Hyrum City Code 17.04.070 Definitions: "Dwelling unit" means one or more rooms in a dwelling, apartment hotel or apartment motel, designed to be occupied by one family for living and sleeping purposes.
 - b. Hyrum City General Requirements and Specifications for Sanitary Sewer Installations 5.2.1.C. Design Regulations: Each dwelling unit shall be served by an individual lateral.
 - c. (Reference Sewer Department Comment #1 in Staff Evaluation First Review)

Engineering:

- 1. See attached comments contained on Site Plan Second Review.
- 2. Provide stormwater calculations and data. Table A was not provided in the submittal, see Engineering comments on sheet: 2 of 10.
- 3. The utility plan is lacking information, see Engineering comments on sheet: 2 of 10.
- 4. Streetscape requirements are not being shown as required by Hyrum City Code 17.45.090 Streetscape Features.

Sewer Department:

1. Each dwelling unit shall be served by an individual lateral per Construction Standard 5.2.1.C. Drawings show one shared lateral for two dwellings which is not to standard. (*Reference Sewer Department Comment #1 in Staff Evaluation First Review*)

Water / Irrigation Department:

- If the original water meter and lateral is used as part of the total of four (4) new, the existing water meter and lateral will need to be updated to comply with Hyrum City Code 13.04 Water System; Hyrum City General Requirements and Specifications for Potable Water Mains, Service Lines and Secondary Pressure Irrigation Installations. (*Reference Water / Irrigation Comment #1 in Staff Evaluation First Review*)
- 2. If the existing water meter and lateral is not used as part of the total of four (4) new, the existing water meter shall be removed, and the existing water lateral will be removed at main line and the main line be capped. (*Reference Water / Irrigation Comment #1 in Staff Evaluation First Review*)

STAFF EVALUATION FIRST REVIEW - Planning Commission: February 13, 2025 Requestor responses in red

Planning and Zoning:

- 1. Staff supports a Mixed Use of Commercial and Hotel as permitted in HCC 17.45.020 Use Regulations.
 - Yes!
- 2. Staff did not receive the required Lighting Plan submittal. HCC 17.45.120 requires that each site plan shall include a lighting plan.
 - Lighting Plan has since been completed and submitted with Site Plan documents
- 3. Staff does not support the west building crossing the east property line of property parcel: 01-050-0023 as proposed on the site plan and recommends combining the two property parcels. HCC 17.45.050 Yard Regulations Commercial Use may permit a zero-yard setback at a property line at a qualifying location; however, it does not qualify a building to encroach beyond a property parcel. If the applicant desires to relocate the

said building to a conforming location on the parcel, Staff will request the following revisions to the site plan:

- a. Each property parcel is serviced by separate power, sewer, water and water meters, fire line (if required), and irrigation connections to main lines; and
- Parcel 0023 and 0024 are owned by individual Market 1860 partners; partners are in process of selling & transferring ownership to the Market 1860 entity which will result in single ownership. Applicant requests that Commission allow Site Plan Approval on condition that this is completed before issue of building permit
- b. Cross access agreements need to be prepared and recorded to each property parcel for UDOT driveway approach interior parking.
- Cross access agreement has been addressed with UDOT and per UDOT will not be signed until issue of building permit
- 4. The site plan proposes parking stalls to be a minimum of eight (8) feet in width and does not identify the proposed parking stall depth. In the C-2 Zone, HCC 17.45.210.C. Off-Street Parking – Special Requirements requires the site plan to provide nine (9) feet by twenty (20) feet parking stalls.
 - Parking stall sizes have been revised to 9 feet wide by 20 feet deep
- 5. The applicant did not submit a total parking stall count on the site plan. Staff supports the required parking of one (1) space per each unit, room, or guest accommodation as regulated in HCC 17.45.200 Off Street Parking Specific Requirements which reserves a total of twelve (12) parking spaces for the Hotel Use.
 - Parking totals 54 stalls, includes 1 ADA stall & 1 ADA Van Accessible Stall
- 6. Without the applicant providing the exact square feet of proposed commercial uses (excluding storage areas, restrooms, office areas, etc.) Staff cannot verify the required off-street parking requirements regulated in HCC 17.45.200 Off-Street Parking Specific Requirements to conclude parking requirements.
 - Total commercial floor space is 4,050 SF (2,100 SF in West, 1,950 SF in East)
 - Breakdown of estimated commercial use is as follows:
 - Retail / Market = 2,100 SF (requires 1 per 250 SF = 8 stalls)
 - Single Office = 224 SF (requires 1 per employee = 1 stall)
 - Restaurant / Café = 1,275 (requires 1 per 40 SF = 32 stalls)
 - Hotel Space = 13 units (requires 1 per unit = 13 stalls)
 - Total stalls required = 54
- 7. The site plan shows the cedar fence terminating at the south portion of the paved parking lot. The parking lot is still facing adjoining neighbor properties. HCC 17.45.050 Yard Regulations Commercial Use requires the fence to continue south on both east and west property line and along the south property line enclosing the development.
 - Cedar fence continues along west, south, and east property lines
- 8. The Trash Enclosure requirements in the C-2 Zone, HCC 17.45.055 Trash Enclosure Regulations – Commercial Use requires that enclosures shall be located away from main traffic areas and sheltered from street sight as much as possible. Staff recommends relocating the Trash Enclosure from the current location within the main traffic area and street sight to a conforming location on the site.
 - Trash enclosure relocated to back of parking lot, hidden from street view behind west building, >50' from residential zoning. Have assumed doublesize dumpster enclosure in site plan
- 9. A building permit will be required for building structures as regulated by HCC Section 15.08 Building Permits.
 - Understood
- 10. All construction shall comply with Hyrum City Design Standards and Construction Specifications.
 - Understood

Engineering:

- 1. See comments contained on Site Plan.
 - Site Plan updated per comments

Fire Department:

- 1. Water flow, we need 1750 GPM at the hydrant for 2 hours. If it is less than that the entire building will need to be sprinklered.
 - Fire sprinklers are planned for each building, on both floor levels
- 2. The upstairs hotel/apartments is a R-1, it is required to have Sprinklers.
 - Fire sprinklers are planned for each building, on both floor levels
- 3. We need 26' of clearance on driveway and on all sides of parking for fire apparatus access lot see drawings.
 - 26' driveway clearance has been provided and extends to back side of buildings
- 4. What type of building construction?
 - Wood frame construction with structural steel elements
- 5. Each unit will need to be reviewed and inspected as built out.
 - Understood

Parks Department:

1. No comments or concerns.

• Yes!

- Power Department:
 - 1. Staff requests the applicant contact the Power Department to schedule an initial onsite meeting to verify all existing electrical utilities.
 - Understood, this will happen immediately following site plan approval
 - 2. The applicant must complete and submit the required Commercial Structure Load Data Sheet to the Power Department. The Load Data Sheet is available in Section 7 General Requirements and Specifications for Electrical Installations in Hyrum City Design Standards and Construction Specifications.
 - Load data sheet has been completed and will be submitted immediately following site plan approval
 - 3. All construction specific to electrical work shall verify compliance with Section 7 General Requirements and Specifications for Electrical Installations in Hyrum City Design Standards and Construction Specifications.
 - Understood, electrical systems will be designed by Sine Source Engineering
 - 4. Applicant must maintain and clearance of 10 feet around the interior overhead service line on the property. At the applicant's request, the Power Department can provide visual ribbon indicators on the overhead line to help maintain visual clearance.

Understood, visual ribbon indicators will be requested during construction

Road / Stormwater Department:

- 1. An NOI is generally not required for disturbances less than one (1) acre that are not part of a larger common plan of development project, however, it is the responsibility of the applicant to confirm any and all exemptions pursuant to HCC 13.18.110 Notice of Intent (NOI) – Exemptions. While an NOI is not typically required, applicant is responsible to control Stormwater and Erosion & Pollution on and from the site.
 - If required, contractor will file an NOI; regardless; BMPs will be installed and maintain during construction until all permanent landscaping and stormwater systems are completed
- 2. All public rights of way permits, construction and improvements, and traffic control on Main Street are the Powers and Duties of Utah Department of Transportation.
 - Understood, applicant has already engaged in permits and discussions with UDOT regarding this project and will continue to do so
- 3. Hyrum City may enforce provisions and all other ordinances relating to the maintenance and use of streets, culverts, drains, ditches, waterways, curbs, gutters, sidewalks and

other public ways; and the repair or cause to be repaired, all defects coming to the Hyrum City Department of Streets attention and make reasonable precautions to protect the public from injuries due to such defects pending their repair pursuant to HCC 2.36.030. Powers and Duties.

• Understood

Sewer Department:

- Staff recommends the engineer verify the existing sewer lateral and design a new lateral for peak flow for both buildings, and demonstrate on the plans the material, quality and specifications as regulated by HCC 13.12.200 Service and Other Pipes – Material, Quality and Specifications – Alteration or Inspection.
 - Understood, sewer line size shown on Site Plan, existing laterals to be abandoned
- 2. For any proposed use or future use that will introduce or cause to be introduced into the Publicly Owned Treatment Works (POTW) or any pollutant or wastewater which causes to pass through or interference, the applicant must comply with HCC Section 13.13 Wastewater Pretreatment, whether or not the source is subject to categorical Pretreatment Standards or any other National, State or Local Pretreatment Standards for requirements.
 - Understood, additionally it is anticipated that a grease trap will be provided for restaurant spaces
- 3. All construction specific to sanitary sewer shall verify compliance with Section 5 General Requirements and Specifications for Sanitary Sewer Installations in Hyrum City Design Standards and Construction Specifications.

• Understood

Water / Irrigation Department:

- HCC 13.04.180 Separate Connections Required for Each User regulates that each service user cannot be supplied from the same service pipe, connection or water meter unless special permission for such combination usage has been granted by the governing body. Staff recommends that each user have its own water service (tentatively 2 meters for main level commercial uses, and 1 meter for upper-level hotel uses for each building).
 - Understood, owner would like to request a single meter for each floor-level in each building (4 meters total)
- 2. Staff recommends that all meters be installed in a meter vault for multiple meters for 3/4" to 1-1/2" meters as approved in Section 6 of the Hyrum City General Requirements and Specifications for Potable Water Mains, Service Lines, and Secondary Pressure Irrigation Installations.
 - Understood
- 3. Staff recommends that each service to commercial uses be a minimum of 1-1/2" to ensure adequate future flows.
 - Understood
- 4. If the mixed commercial use and hotel use requires a fire sprinkler system required by the International Fire Code and requires an additional fire line connection to the water main, the fire line connections shall comply with Section 6 Hyrum City General Requirements and Specifications for Potable Water Mains, Service Lines, and Secondary Pressure Irrigation Installations.
 - Understood
- 5. All construction specific to sanitary sewers shall verify compliance with Section 5 General Requirements and Specifications for Potable Water Mains, Service Lines, and Secondary Pressure Irrigation Installations in Hyrum City Design Standards and Construction Specifications.
 - Understood

PLANNING COMMISSION RESPONSIBILITY:

- 1. Site plan approval is a function of the Planning Commission which has a wide latitude in specifying conditions and requirements for approval.
- 2. The Planning Commission should have a thorough discussion of the site plan, staff comments, and specifying conditions and requirements for approval.
- 3. The Planning Commission is a recommending body to the City Council and should be specific in their motion to the City Council.

STAFF RECOMMENDATION:

1. The Planning Commission recommend site plan approval to the City Council based on the applicants compliance with staff evaluations and staff comments, applicant submittals, and any additional Planning Commission recommendations. The City Council can require revisions as necessary.

STIPULATIONS:

- 1. The City Council may approve, disapprove, approve with additional conditions and requirements, or require the requestor to return to the Planning Commission with revisions; or require the applicant to return revisions to the City Council.
- 2. Final Approval must be obtained from the City Council. Following final approval, the requestor will provide final approval documents to staff for the issuance of a permitted use permit, issuance of Hyrum City Approval final approval documents, and issuance of notification to attend a pre-construction meeting.

FINDINGS OF FACT:

- 1. The property is located in the Commercial Zone C-2.
- 2. Mixed Commercial Uses are a permitted use in the Commercial Zone C-2.

ATTACHMENTS:

- 1. Cache County Parcel and Zoning Viewer Aerial View
- 2. Hyrum Market 1860 Scope Narrative Updated
- 3. Hyrum Market 1860 Conceptual Building Exterior Elevation
- 4. Hyrum Market 1860 Site Plan Submittal Updated (With Engineering Comments)



Cache County Parcel and Zoning Viewer – Aerial Image

Hyrum City 60 West Main Street Hyrum, UT 84319

Subject: Market 1860 Site Plan Approval

Attn: Planning and Zoning Commission

Scope Narrative

The Market 1860 project includes two identical mixed-use buildings consisting of first-level commercial space and second-level residential rental units. The footprint of each building is planned at 40-feet by 70-feet with a conventional peaked roof line down the longitudinal center of the building. The first-floor commercial space in each building will be divided into two (north and south) units. Parking and landscape areas will be constructed behind the buildings and open patio and outdoor dining areas will wrap the building perimeter.

The two commercial spaces in the west building will consist of open classrooms, conference, and market space with a small demonstration kitchen, restrooms, storage and mechanical room. The two units will be constructed with an open hallway so that the spaces can be used simultaneously if needed. One purpose of these units is to provide a place for community events available for rent or use depending on the function or activity. It may be utilized by home-school groups, small training classrooms, farmer's or craft markets, non-profit organizations, and more.

The commercial space in the east building will consist of two café, bakery, or restaurant-type lease units. The owner's intent is to construct the two units as shell-space and allow tenants an opportunity to finish the space according to business needs.

The second level in each building will consist of <u>six and seven</u> short-term hotelstyle residential units with single and double-bed units. Each building will also include a common laundry facility on the same floor. The residential units will be accessible by two stairways and secured first-level exterior door located on the shared patio side between buildings. An elevator will be provided in the East Building for ADA access to the second floor.

Landscaping Plan

Landscaping will include 15-foot-wide green spaces along the east and west edges of the site as well as small landscape islands in the parking lot. Storm water retention ponds will occupy a portion of the landscape area but will be maintained as usable or manicured swales. Vegetation will include trees, lawn, native grass, flowers, and shrubs. Landscaping will be meticulously maintained to attract renters to the short-term rental units.

Market 1860 -

<u>Ownership</u>

Annette Francis (Hyrum, UT) Andrea Nielsen (Hyrum, UT) Amy Knight (Park City, UT)

Design-Builder

Jardine Builders, LLC (Millville & Centerville, UT)

Architect & Engineers

Architect – Gary Hunt Architect, P.C. (Syracuse, UT) Civil & Structural – Beyler Engineering (Lakewood, WA) Mechanical – VBFA (Logan, UT) Electrical – Sine Source Engineering (Logan, UT) Geotechnical – Civil Solutions Group (Logan, UT)



MARKET 1860 - EXTERIOR ELEVATION

*DETAILS IN THIS DRAWING ARE CONCEPTUAL. BUILDING TRIM, WINDOW AND DOOR LAYOUT, AND OTHER ELEMENTS MAY VARY AT FINAL DESIGN.



С	IVIL ABBREVIATIONS
BSBL	BUILDING SETBACK LINE
CB	CATCH BASIN
CO	CLEAN OUT
CONC	CONCRETE
DI	DUCTILE IRON
FH	FIRE HYDRANT
HP	HIGH POINT
LP	LOW POINT
MH	MANHOLE
PGHS	POLLUTION GENERATING HARD SURFACE
PVC	POLYVINYLCHLORIDE
RPBA	REDUCED PRESSURE BACKFLOW PREVENTOR
SD	STORM DRAIN
SDCO	STORM DRAIN CLEAN OUT
SDMH	STORM DRAIN MANHOLE
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSFM	SANITARY SEWER FORCE MAIN
SSMH	SANITARY SEWER MANHOLE
UBC	UNIFORM BUILDING CODE
WM	WATER METER
XFMR	IRANSFORMER
WSDOT	WASHINGTON STATE DEPARTMENT OF
	IRANSPORTATION

EXISTING UTILITIES

EX WATER LINE

EX METER

EX GAS LINE

EX U/G POWER LINE

EX LIGHT POLE

EX POWER POLE

EX SEWER PIPE

EX OVERHEAD POWER LINE

EX U/G COMMUNICATION LINE

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() J	RIP RAP PAD				
• DS	ROOF DOWNSPOUT				
ØSDCO	STORM CLEANOUT				
	AREA DRAIN / CATCH BASIN TYPE 1				
	FLOW ARROW/SLOPE ARROW				
	SANITARY SEWER LATERAL				
0	SANITARY CLEANOUT				
ww	WATER SERVICE / FIRE LINE				
$\left \right>$	WATER METER				
	IRRIGATION CONTROL VALVE				
	LIGHT POLE				



UDOT UTILITY SPECIFICATIONS & NOTE

1. CONTRACTOR TO USE TRENCHLESS CONSTRUCTION UNLESS SUFFICIENT REASON IS GIV CONSTRUCTION.

2. ALL UTILITY TRENCHES TO BE CUT AT RIGHT ANGLES TO TRAVEL LANES. TEMPORARY PA LEAST 2-INCH ROTOMILING APPROACHING AND LEAVING THE PATCH IN ALL TRAVEL LANES IMPA T-PATCH ASPHALT PLACEMENT PER APWA PLAN NO. 255.

3. ALL FINAL PARALLEL SAWCUT LINES OR ROTOMILLING MUST BE LOCATED EITHER AT DES DESIGNED CENTER OF LANE. SAWCUTS MUST BE CLEANED AND TACK-COAT APPLIED BEFORE A

4. ALL TRENCHES FOR LATERALS WITHIN A 100FT DISTANCE MUST HAVE 2 INCH MILL AND RI PATCH. SINGLE LATERALS REQUIRE A 2 INCH MILL FOR 20FT EACH DIRECTION

5. ALL ASPHALT CONSTRUCTION WITHIN UDOT RIGHT-OF-WAY TO MATCH EXISTING. HOT MIX BE PG-GRADE 64-34 ASPHALT BINDER, 1/2 INCH NOMINAL MAX, 7-75-115 GYRATION PER UDOT ST 02741; OVER 6 INCHES UNTREATED BASE COURSE (UTBC) PER UDOT SPECIFICATION 02721; OVER BORROW (GB) PER UDOT SPECIFICATION 02056 (WHICHEVER IS GREATER). PROVIDE DOCUMENT FROM A UDOT-QUALIFIED LABORATORY.

6. PAVEMENT SEALING - CHIP SEAL TYPE II WITH EMULSION LMCRS-2 PER UDOT STANDARE (ESTIMATED APPLICATION RATE OF 0.45 GAL/SQ YD) IS REQUIRED ON ALL NEW PAVEMENT WITHIN UDOT RIGHT-OF-WAY.

HYRUM MARKET 1860 CIVIL IMPROVEMENT PLANS PARCEL #'s 01-050-0023 & 01-050-0024

ES	UDOT RIGHT-OF-WAY (MAIN STREET) NOTES	PROJECT
VEN FOR OPEN TRENCH	1. ALL CONSTRUCTION WITHIN THE UDOT RIGHT-OF-WAY SHALL CONFORM TO THE MOST CURRENT UDOT STANDARD (INCLUDING SUPPLEMENTAL) DRAWINGS AND SPECIFICATION. APPLICABLE UDOT STANDARD AND SUPLEMENTAL DRAWINGS ARE INCLUDED IN THIS PLAN SET.	CLIENT: ENC MARKET 1860 LLC BEY 592
ATCHES REQUIRE AT ACTED BEFORE FINAL	2. THE CONTRACTOR IS TO OBTAIN AN ECROACHMENT PERMIT FROM THE APPLICABLE UDOT REGION PERMIT OFFICE PRIOR TO COMMENCING WORK WITHIN THE UDOT RIGHT-OF-WAY. WORKING HOUR LIMITATIONS WILL BE LISTED IN THE LIMITATIONS SECTION OF THE ENCROACHMENT PERMIT.	LAK CON TEL
SIGNED LANE LINES OR	3. UDOT RESERVES THE RIGHT, AS ITS OPTION, TO INSTALL A RAISED MEDIAN ISLAND OR RESTRICT THE ACCESS TO A RIGHT-IN OR	
		UTILITIES
REPLACED AS A SINGLE	4. OWNER, DEVELOPER, AND CONTRACTOR ARE RESPONSIBLE FOR ANY DAMAGES DIRECTLY OR INDIRECTLY WITHIN THE UDOT RIGHT-OF-WAY AS A RESULT OF DEVELOPMENT ACTIVITIES.	WATER: HYRUM CITY CULINARY WATER
IX ASPHALT (HMA) SHALL FANDARD SPECIFICATION	5. OWNER, DEVELOPER, AND/OR CONTRACTOR IS REQUIRED TO HIRE AN INDEPENDENT COMPANY FOR ALL TESTING WITHIN THE UDOT RIGHT-OF-WAY.	AUTHORITY
ER 11 INCHES GRANULAR TATION OF COMPACTION	6. ALL SIGNS INSTALLED ON THE UDOT RIGHT-OF WAY MUST BE HIGH INTENSITY GRADE (TYPE XI SHEETING) WITH A B3 SLIP BASE. INSTALL ALL SIGNS PER UDOT SN SERIES STANDARD DRAWINGS.	GRAVITY HYRUM CITY SEWER AUTHORITY
) SPECIFICATION 02785	7. COMPLY WITH THE REQUIREMENTS OF UTAH CODE 17-23-14 (DISTURBED CORNERS - COUNTY SURVEYOR TO BE NOTIFIED - COORDINATION WITH CERTAIN STATE AGENCIES).	POWER: HYRUM CITY POWER

Know what's below. Call 811 before you dig. DUE STAKES OF UTAH UTILITY NOTIFICATION CENTER, INC. WWW.bluestakes.org 1-800-662-4111	INIT DATE		
IMPERVIOUS / PERVIOUS SITE AREAS EXISTING IMPERVIOUS ONSITE: GRAVEL (PGHS) 1.060 SF (0.024 Ac)			
PROPOSED IMPERVIOUS ONSITE: BUILDING #1 3,400 SF (0.078 Ac) BUILDING #2 2,800 SF (0.064 Ac) ASPHALT ACCESS/PARKING LOT (PGHS) 23,065 SF (0.523 Ac) CONCRETE (PGHS) 325 SF (0.007 Ac) CONCRETE 63 SF (0.001 Ac) TOTAL: 29,653 SF (0.673 Ac)	VO. DESCRIPTION		
PROPOSED PERVIOUS ONSITE: LANDSCAPING12,410 SF (0.285 Ac)PROPOSED IMPERVIOUS OFFSITE: ASPHALT ACCESS (PGHS)49 SF (0.001 Ac) S20 SF (0.021 Ac) CONCRETE DRIVEWAY APPROACH (PGHS)920 SF (0.021 Ac) CONCRETE CURBING (PGHS)176 SF (0.004 Ac) CONCRETE SIDEWALKCONCRETE FOOT BRIDGES45 SF (0.001 Ac) TOTAL:TOTAL:1,330 SF (0.030 Ac)TOTAL PROPOSED IMPERVIOUS:30,983 SF (0.918 Ac) TOTAL PROPOSED (PGHS):STHE PLAN STILL TO PROVIDE SIDEWALKS IN BETWEEN THE BUILDINGS? THESE NEED TO BE SHOWN AND INCORPORATED INTO THE STORMWATER CALCULATIONS. DRAINAGE PATTERNS NEED TO BE SHOWN FOR THESE AREAS. ADA PATHS NEED TO BE PROVIDED AT A MINIMUM.WHAT KIND OF INFILTRATION DO YOU EXPECT? HAVE ANY PERCOLATION TESTS BEEN DONE TO SHOW THAT THE WATER WILL DRAIN DOWN WITHIN 72 HOURS?WILL THE PROXIMITY OF THESE BASINS CAUSE ANY ISSUES TO THE NEARBY STRUCTURES ON THE OTHER LOTS?		EYLER INSULTING Sign. Manage NGROERING LAREWOOD, WA 98499 Sign. Manage NGROERING LAND SURVEYING NGINEERING LAND SURVEYING NGINE LAND SURVEYING S	
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<u>SINEER:</u> (LER CONSULTING 0 100TH ST SW, STE 25 (EWOOD, WA 98499 NTACT: LANDON BEYLER, P.E. .: 253-984-2900 <u>PARKING:</u> STANDARD PARKING: 52 STALLS ADA PARKING: 2 STALLS TOTAL: 54 STALLS	EL CONTRACTOR	NI 4959075 BEYLER ANDON C. BEYLER ATE OF UT AT MUL 3/19/2025	
CITY ENGINEER APPROVAL I CERTIFY THAT I HAVE EXAMINED THIS PLAT AND FIND IT TO BE IN GENERAL COMPLIANCE TO THE CITY STANDARDS CITY ENGINEER	JOB 2 SHEE	NUMBER 4.00160 ^т 1 OF 10	

CIVIL IMPROVEMENT PLANS PARCEL #'s 01-050-0023 & 01-050-0024

EXISTING UTILITIES				
	EX WATER LINE			
\square	EX METER			
G	- EX GAS LINE			
P P	EX U/G POWER LINE			
(P)	EX OVERHEAD POWER LINE			
COM	- EX U/G COMMUNICATION LINE			
\$	EX LIGHT POLE			
-0-	EX POWER POLE			
	- EX SEWER PIPE			
O ø	EX SANITARY MH/CO			



EX POWER POLE	
EX SEWER PIPE	
EX SANITARY MH/CO	
ND	
EX PROPERTY BOUNDARY	
EX RIGHT-OF-WAY	
EX CENTERLINE	
EX LOT LINE	
EX MAJOR CONTOURS	
EX MINOR CONTOURS	
EX ASPHALT	
EX CONCRETE	
EX CURBING	
EX WOOD FENCE	
EX SIGN	
ASPHALT PAVEMENT	
CONCRETE	
BUILDING	
LANDSCAPING	-
WOOD FENCE	
WHEEL STOP	
TREE	
STORM DRAINAGE PIPE	
POND BOTTOM	
RIP RAP PAD	
ROOF DOWNSPOUT	
STORM CLEANOUT	
AREA DRAIN / CATCH BASIN TYPE 1	
FLOW ARROW/SLOPE ARROW	
SANITARY SEWER LATERAL	
SANITARY CLEANOUT	
WATER SERVICE / FIRE LINE	
WATER METER	
RRIGATION CONTROL VALVE	
LIGHT POLE	



	GENERAL NOTES
1.	THE EXISTING CONTOURS SHOWN HEREON WERE OBTAINED VIA FIELD SURVEY COMPLI
2.	THE SITE GENERALLY SLOPES NORTHWESTERLY TOWARDS THE PROPOSED RETENTION
3.	STORM RUNOFF GENERATED FROM THE PROPOSED DEVELOPMENT WILL BE CONVEYED
1.	A. DOWNSPOUTS FROM ROOF AREAS WILL BE DIRECTED TO LANDSCAPE AREAS OR STR
₽ .	LANDSCAPE AREAS WILL SHEET FLOW TO SWALES AND COLLECTED BY AREA DRAINS A UNDERGROUND PIPING.
	C. FRONT YARDS, DRIVEWAYS, AND PORCHES WILL FLOW TO STREETS WHERE CURB AN AT INTERSECTIONS AND LOW POINTS. UNDERGROUND PIPING INTERCONNECTING THE BASIN.
4.	PIPE AND RETENTION BASIN SIZING WAS PERFORMED USING THE RATIONAL METHOD (Q
A.	Q = DESIGN FLOW IN CUBIC FEET PER SECOND (CFS)
B .	C = RUNOFF COEFFICIENT WHICH REPRESENTS THE PERCENT OF PRECIPITATION TH
Ċ.	I = RAINFALL INTENSITY IN INCHES PER HOUR (IN/HR)
Ð.	A = DRAINAGE AREA IN ACRES
5.	THE 100 YEAR - 24 HOUR STORM EVENT WAS USED TO SIZE THE RETENTION BASIN AS S UTILIZED WHEN DETERMINING THE VOLUME REQUIRED TO RETAIN THE DESIGN STORM I
6.	STORM INTENSITIES USED IN THIS STUDY AREA ARE TAKEN FROM THE NATIONAL WEATH SERVER. INTENSITIES FOR THE 100 YEAR STORM ARE SHOWN IN TABLE A. WHERE I









PIPED DRIVEWAY APPROACH

1. UNTREATED BASE COURSE: Provide material specified in APWA Section 32 11 23. A. Do not use gravel as a substitute for untreated base course without ENGINEER's permission.

B. Place material per APWA Section 32 05 10.

C. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness before compaction is 8 inches when using riding compaction equipment or 6 inches when using hand held compaction equipment.

2. CONCRETE: Class 4000 per APWA Section 03 30 04.

A. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.

B. Place concrete per APWA Section 03 30 10.

C. Provide 1/2 inch radius on concrete edges exposed to public view.

D. Cure concrete per APWA Section 03 39 00 with type ID Class A or B (clear with fugitive dye) membrane forming compound unless specified otherwise.

3. EXPANSION JOINT: Make expansion joints vertical, full depth 1/2 inch wide with type F1

filler material per APWA Section 32 13 73. Set top of filler flush with surface of concrete. CONTRACTION JOINT: Make contraction joints vertical.

A. 1/8 inch wide and 2 inches deep or 1/4 slab thickness if slab is greater than 8 inches thick. B. Maximum length to width ratio for non-square panels is 1.5 to 1.

C. Maximum panel length (in feet) is .2.5 times the slab thickness (in inches) to a maximum of 15 feet

5. REINFORCEMENT: ASTM A 615, grade 60, galvanized or epoxy coated deformed steel. See APWA Section 03 20 00 requirements . Not required if driveway ramp is constructed without a cold joint.

6. FIELD CHANGES TO SLOPE REQUIREMENTS: The following design parameters are to be used as a guide. Specific uses or site conditions may require profile design submittal for review and acceptance.

A. As a rule, driveway grades may have a 6 percent change in slope over a 11 feet wheel base run for both crest or sag vertical curves.

B. Where heavy truck use and fire truck access applies, or to improve design speed, design grades should be cut in half.

C. Grades subject to roadway crown and gutter span to be reviewed by ENGINEER for high centering and vehicle approach speed.

7. FINISH: Broomed.

8 PROTECTION AND REPAIR:

A. Fill flow-line with water. Repair construction that doesn't drain

B. Protect concrete from deicing chemicals during cure period.



1. ASPHALT CONCRETE: As specified in APWA Section 32 12 05. Compaction to be

within range of 92 to 96 percent relative to ASTM D 2041 (Rice Method).

2. CONCRETE: Class 4000 per APWA Section 03 30 04. A. If necessary, provide concrete that achieves design strength in

less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air

temperature exceeds 90 degrees F.

B. Place concrete per APWA Section 03 30 10.

C. Provide 1/2 inch radius on concrete edges exposed to public view. D. Cure concrete per APWA Section 03 39 00 with type ID Class A or

B (clear with fugitive dye) membrane forming compound unless specified

otherwise.

3. REINFORCEMENT: ASTM A 615, grade 60, galvanized or epoxy coated deformed

steel. See APWA Section 03 20 00 requirements.



NOTES:

- USE ³/₄ INCH DEFORMED DOWELS ON 5 FT MAXIMUM CENTERS.
- PRECAST CURBS: 2.
 - MINIMUM OF 10 FT IN LENGTH. Α.
 - DOWELS AT A MINIMUM OF 3 PER 10 FT LENGTH.
 - INCLUDE ADEQUATE REINFORCING STEEL TO WITHSTAND HANDLING STRESSES.
- MEASURE CURB HEIGHT VERTICALLY FROM THE FLOW LINE OF THE GUTTER TO TOP BACK OF CURB.
- 4. REFER TO STD DWG GW 2B FOR CURB AND GUTTER AT ADA ACCESSES.

- ALL CONSTRUCTION AND MATERIALS SHELL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CITY OF HYRUM STANDARDS, STATE OF UTAH AND ANY OTHER APPLICABLE STANDARDS ISSUED BY THE CONTROLLING AGENCY. CONTRACTOR AND DEVELOPER ARE TO FAMILIARIZE THEMSELVES WITH THE STANDARDS.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION. ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND FIELD CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE OWNER. ANY WORK DONE WITHOUT VERIFICATION IS DONE SO AT THE CONTRACTORS RISK AND EXPENSE IF ERRORS OCCUR.
- CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY AREAS AND/OR MATERIALS DAMAGED DURING CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ALL ADJACENT PROPERTY (PUBLIC AND PRIVATE) FROM ALL CONSTRUCTION DEBRIS.
- CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION FROM ALL NEW CONSTRUCTION TO EXISTING CONDITIONS.

- 6. CONTRACTOR SHALL PROVIDE ALL NECESSARY AUTOMOBILE AND PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY LOCAL, STATE AND FEDERAL CODES AND ORDINANCES.
- CONTRACTOR SHALL REPLACE SURVEY MONUMENTS DAMAGED DURING CONSTRUCTION. SURVEY MONUMENTS TO BE REPLACED BY A REGISTERED, LICENSED LAND SURVEYOR.
- CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, INCLUDING FIBER OPTIC. ANY DAMAGES TO EXISTING UTILITIES WILL BE REPAIRED AT CONTRACTORS EXPENSE.
- DIMENSIONS SHOWN ARE TO THE CENTER OF THE PIPELINE UNLESS OTHERWISE NOTED.
- 10. DISTANCES SHOWN ALONG PIPELINES ARE HORIZONTAL DISTANCE AND NOT ACTUAL PIPE LENGTHS. MORE PIPE MAY BE REQUIRED TO COMPLETE CONSTRUCTION THAN IS DIMENSIONED IN THE PLANS.
- 11. THRUST BLOCKS SHALL BE PLACED ON WATERLINES AT ALL DIRECTIONAL CHANGES, FITTINGS, BENDS, ELBOWS, FIRE HYDRANTS AND GATE VALVES AS SHOWN IN THE PROJECT PLANS.

- GENERAL NOTES (APPLICABLE TO ALL CIVIL SHEETS)
 - 12. CONTRACTOR IS REQUIRED TO HAVE A SET OF PLANS 17. ON SLOPING AREAS THE CONTRACTOR SHALL TAKE ON THE SITE AT ALL TIMES. ANY WORK COMPLETED WITHOUT A SET PRESENT IS DONE SO AT THE CONTRACTORS RISK AND EXPENSE IF ERRORS OCCUR.
 - 13. CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER NECESSARY FOR DUST ABATEMENT, COMPACTION, ETC. THIS MAY BE COORDINATED WITH HYRUM WATER DEPARTMENT.
 - 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING SOURCES FOR GRANULAR MATERIALS, WATER, WASTE SITES, AND ANY OTHER MATERIALS SOURCES AS REQUIRED FOR PROJECT COMPLETION.
 - 15. ANY WORK DONE WITHIN A PUBLIC RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE TRANSPORTATION AGENCY AND SHALL MEET THAT AGENCY AND THE REQUIREMENTS OF ANY RIGHT-OF-WAY OR SPECIAL USE PERMITS.
 - 16. THE CONTRACTOR SHALL COORDINATE ALL LIVE TAPS AND ANY OTHER WORK OR MANIPULATION OF THE EXISTING WATER SYSTEM WITH THE CITY.

SHOWN ON THE PROJECT PLANS.

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ASPHALT CONCRETE

ASHIET INCOMENT

(NOTE: 1)

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CONCRETE

(NOTE 2)

WATCH EXISTING.

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THE CONTRACTOR'S EXPENSE.









SECTION B-B - ASPHALT TIE-IN



SECTION B-B - CONCRETE TIE-IN





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CITY ENGINEER APPROVAL

I CERTIFY THAT I HAVE EXAMINED THIS PLAT AND FIND IT TO BE IN GENERAL COMPLIANCE TO THE CITY STANDARDS

CITY ENGINEER

DATE

ASPHALT CONCRETE T-PATCH

1. ADDITIONAL PAVEMENT REMOVAL: Remove additional pavement to a painted lane stripe, a lip of gutter, a curb, an existing pavement patch, or an edge of the pavement if such street feature is within 2 feet of the second saw-cut.

2. UNTREATED BASE COURSE: Provide material specified in APWA Section 32 11 23. A. Do not use gravel as a substitute for untreated base course without ENGINEER's permission.

B. Place material per APWA Section 32 05 10.

C. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness before compaction is 8 inches when using riding compaction equipment or 6 inches when using hand held compaction equipment. 3. FLOWABLE FILL: Provide 28 day 60 psi controlled low strength material as specified in APWA Section 31 05 15. Use fill material which flows easily and vibration is not required.

Cure to initial set before placing aggregate base or asphalt pavement. Use flowable fill in excavations that are too narrow to receive compaction equipment. 4. TACK COAT: APWA Section 32 12 14. Full tack coat coverage on all vertical surfaces.

5. ASPHALT PAVEMENT: Use asphalt concrete specified in APWA Section 33 05 25. A. Install in lifts no greater than 3 inches after compaction.

B. Compact to 94 percent of ASTM D 2041 (Rice Method) plus or minus 2 percent. 6. REINFORCEMENT: ASTM A 615, Grade 60, No. 5 galvanized or epoxy coated deformed

steel 12 inches on center. A. Required if existing concrete thickness is 6 inches or greater.

B. Not required if (1) existing concrete is less than 6 inches thick, (2) existing concrete is deteriorating, (3) excavation is less than 3 feet square, (4) asphalt pavement is substituted for concrete substrate.

7. CONCRETE SUBSTRATE: Class 4000 per APWA Section 03 30 04. Place concrete per APWA Section 03 30 10. Cure to initial set before placing new asphalt concrete patch. 8. JOINT REPAIR: If a crack occurs at the "T" patch connection to existing pavement or at any street fixture, seal the crack per APWA Section 32 01 17.

9. PATCH REPAIR: Repair the asphalt pavement patch if any of the following conditions within the patch occur.

A. Pavement surface distortion exceeds 1/4 inch deviation in 10 feet. Repair option: Plane off surface distortions. Coat planed surfaces with a cationic or anionic emulsion that complies with APWA Section 32 12 03 and provide sand blotter.

B. Cracks at least 1-foot long and 1/4 inch wide occur more often than 1 in 10 square feet. Repair option: Crack seal.

C. Asphalt raveling is greater than 1 square foot per 100 square feet. Repair option: Mill and inlay.

SHALLOW EXCAVATION

(LESS THAN 48 INCHES FROM PAVEMENT SURFACE TO BOTTOM OF EXCAVATION)







Asphalt concrete "T" patch

83



feature is within 2 feet of the second saw-cut. permission.

steel 24 inches on center. substituted for concrete substrate. within the patch. Repair option: Crack seal. and inlay.





ASPHALT CONCRETE T-PATCH

- 1. ADDITIONAL PAVEMENT REMOVAL: Remove additional pavement to a painted lane stripe, a lip of gutter, a curb, an existing pavement patch, or an edge of the pavement if such street
- 2. UNTREATED BASE COURSE: Provide material specified in APWA Section 32 11 23. A. Do not use gravel as a substitute for untreated base course without ENGINEER's
- B. Place material per APWA Section 32 05 10.
- C. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness before compaction is 8 inches when using riding
- compaction equipment or 6 inches when using hand held compaction equipment. 3. FLOWABLE FILL: Provide 28 day 60 psi controlled low strength material as specified in APWA Section 31 05 15. Use fill material which flows easily and vibration is not required.
- Cure to initial set before placing aggregate base or asphalt pavement. Use flowable fill in excavations that are too narrow to receive compaction equipment. 4. TACK COAT: APWA Section 32 12 14. Full tack coat coverage on all vertical surfaces.
- 5. ASPHALT PAVEMENT: Use asphalt concrete specified in APWA Section 33 05 25. A. Install in lifts no greater than 3 inches after compaction. B. Compact to 94 percent of ASTM D 2041 (Rice Method) plus or minus 2 percent.
- 6. REINFORCEMENT: ASTM A 615, Grade 60, No. 5 galvanized or epoxy coated deformed
- A. Required if existing concrete thickness is 6 inches or greater.
- B. Not required if (1) existing concrete is less than 6 inches thick, (2) existing concrete is deteriorating, (3) excavation is less than 3 feet square, (4) asphalt pavement is
- 7. CONCRETE SUBSTRATE: Class 4000 per APWA Section 03 30 04. Place concrete per APWA Section 03 30 10. Cure to initial set before placing new asphalt concrete patch.
- 8. JOINT REPAIR: If a crack occurs at the "T" patch connection to existing pavement or at any street fixture, seal the crack per APWA Section 32 01 17. 9. PATCH REPAIR: Repair the asphalt pavement patch if any of the following conditions occur
- A. Pavement surface distortion exceeds 1/4 inch deviation in 10 feet. Repair option: Plane off surface distortions. Coat planed surfaces with a cationic or anionic emulsion that complies with APWA Section 32 12 03 and provide sand blotter.
- B. Cracks at least 1-foot long and 1/4 inch wide occur more often than 1 in 10 square feet.
- C. Asphalt raveling is greater than 1 square foot per 100 square feet. Repair option: Mill

DEEP EXCAVATION

(MORE THAN 48 INCHES FROM PAVEMENT SURFACE TO BOTTOM OF EXCAVATION)



SECTION 02056

GENERAL PART 1

- 1.1 SECTION INCLUDES
 - A. Embankment, backfill, and bridge approach embankments.

1.2 RELATED SECTIONS

- A. Section 02721: Untreated Base Course (UTBC)
- B. Section 03575: Flowable Fill

1.3 REFERENCES

- A. AASHTO M 145: Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes
- AASHTO T 11: Materials Finer than 75 µm (No. 200) Sieve in Mineral B Aggregates by Washing
- C. AASHTO T 27: Sieve Analysis of Fine and Coarse Aggregates
- D. AASHTO T 99: Moisture-Density Relations of Soils Using a 2.5 kg (5.5-lb) Rammer and a 305 mm (12 inch) Drop
- AASHTO T 180: Moisture-Density Relations of Soils Using a 4.54 kg (10-F. lb) Rammer and a 457 mm (18 inch) Drop
- F. UDOT Materials Manual of Instruction
- G UDOT Minimum Sampling and Testing Requirements

1.4 DEFINITIONS

- A. Borrow material imported material for use in a constructed fill or backfill.
- B. Embankment material - suitable material from project roadway excavation or other excavation for use in a constructed fill or backfill.

Embankment, Borrow, and Backfill 02056 - Page 1 of 8

2025 Standard Specifications Latest Revision: September 14, 2023

PART 2 PRODUCTS

2.1 GENERAL

A. Provide materials free of contamination from chemical or petroleum products for embankment, borrow, and backfill placements. Materials may include recycled Portland Cement Concrete. Do not include asphalt pavement materials.

2.2 MATERIALS

- A. Borrow
- Classifications A-1-a through A-4. Refer to AASHTO M 145.
- Granular Borrow
- Classification A-1-a. Refer to AASHTO M 145.
- Non-plastic. Meet the gradation requirements of Table 1 3.

	Table 1			
Granular Borrow Gradation				
Sieve Size	Percent Passing			
4 inch	100			
3 inch	90 - 100			
1 inch	60 - 100			
1/2 inch	30 - 80			
No. 4	25 - 65			
No. 10	0 - 50			
No. 40	0 - 30			
No. 200	0 - 15			

UTBC meeting the requirements of Section 02721, may be used, at 4 no additional cost to the Department, upon authorization of the Engineer.

Granular Backfill Borrow

- Classification A-1-a. Refer to AASHTO M 145.
- Well-graded, 2 inch maximum.
- Free-Draining Granular Backfill Meet the gradation requirements of Table 2:

Embankment, Borrow, and Backfill 02056 - Page 3 of 8

2025 Standard Specifications Latest Revision: September 14, 2023

Asphalt concrete "T" patch

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Plan No.

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Drawing 2 of 2

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						UE STAKES OF UT ITY NOTIFICATION CENTER vww.bluestakes.or 1-800-662-4111	(AH) , INC. '9	INIT			
	C.	Well-graded mail particle sizes. T in a dense mass	terial – Ma 'his even d s upon com	terial having an ev istribution of partic spaction.	en distributior les of differen	n of different It sizes results		IPTION			
.5	SUBN	MITTALS						SCR			
	A.	Provide the follo project: 1. Supplier a 2. Gradation	wing for in and source n analysis.	formation before de of materials. Refer to AASHTO	elivering mate	erial to the		NO. DE			
		 Soli class Maximum a. Us 99 	Dry Dens AASHT(Method D	ity and Optimum M T 180 Method D for all other soils.	for A-1 soils a	mination and AASHTO T				ICE Ste #25 99	com
	В.	Requests, for re granular borrow.	view, to us	e Untreated Base	Course (UTB	C) instead of				h St SW, WA 984	- 2900 Isulting
	C.	Engineering proj configurations fo this Section, 2.2 1. Stamped Professio	posais for or drainage G. Includ drawings a nal Engine	e pipe bedding and e all of the following and specifications per licensed in the s	pipe backfill a g: signed and se state of Utah.	trench as outlined in ealed by a				CORPORA 5920 100t Lakewood,	beylercor
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	D.	Proposals, for re working platform	eview, to pl 1.	ace an initial layer	of granular m	aterial as a				n. Ma	ing land : Ining & Fea Ruction ma
.6	ACCE	PTANCE							$\overline{2}$	I di	I PLAN CONSTI
	A.	Acceptance sam Sampling and Te	npling and esting Req	testing is according uirements.) to UDOT Mi	from any			Ш В Ш	C O N	JCTURAL ENG 1ANAGEMENT SERVICES
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	C.	Remove noncon	nforming m	aterial and replace	with accepta	ble material.					
		Em	nbankment	, Borrow, and Back	cfill					Ž	
			02056	- Page 2 of 8	2025 Standa	rd Specifications	5			570	
				Latest F	levision: Sep	tember 14, 2023	3			INC	2
		Fre	e Draining	Table 2 Granular Backfill 0	Gradation	I				ASF	202
		Siev 1½ inc	h Size	Percent Pas 90-100	ising				90	M.	TE: 19
		1 inch ¾ inch ¾ inch	h h	20-55 0-15 0-5				EET 2	18(NS	DA
	E.	Embankment 1. Classif 2. 3 inch	for Bridge fication A-1 maximum	1. Refer to AASHT	O M 145.			S SH	ET	IT PLA	VERT:
	F.	Embankment 1. Roadw a.	Material vay excava Do not inc	ation and other exc clude unsuitable ma	avation mate aterials such	rial. as organic, froz	en,	TAIL	XX	MEN	
		b.	or contam Do not use dimension	inated soils. e rock or broken co over 1 ft.	oncrete mate	rials with any	6910) -	DE	1AI	ROVE	ALE: DRZ:
		2. Borrow	v may be s	ubstituted for emb	ankment mat	erial.		ND	<	MP	S DH
	G.	Drainage Pip 1. Classif a.	e Bedding fication A-1 Well-grad	and Drainage Pipe 1. Refer to AASHT ed material.	O M145.	la - la - 1		ES A	M	עור ו	ECKED:
		D. 2. Flowat	Inches for ble fill. Re	aggregate size is all other pipes. fer to Section 0357	1 1/2 Inches to 15.	r plastic pipe, 2)	IOTE	'RL	CI	: CHE
		3. Other and ba a.	materials of ackfill may Native ma	or trench configural be used when auth terials or uniformly priate drainage geo	tions for drain norized. / graded mate textile may b	nage pipe beddi erials enclosed i	ing in	<	Η	ΣĻ	DRAWN EJM
20										M CI	VED: JM
PA	RT 3	EXECUTION								(RU	B/E.
3.1	GE A	Complete de	arina arub	vhina etrinnina an	d stockniling	topsoil and an				Ĥ	DE
	В.	necessary ex	cavation b	efore placing mate	rial.	snowy conditio	ns:			AL AS	
	2324	1. Do not snow-o	t place emi covered an	bankment, borrow, eas.	or backfill m	aterial on frozer	n or	did diama di	NI A9	39075 N C.	
			Embankm 020	ent, Borrow, and B 056 – Page 4 of 8 Late	ackfill 2025 Star st Revision: 5	ndard Specificat	tions 2023	R	STATE C	ER	TUTU
		[~~~	3/K)/2 <i>0</i> 25
								JOB I	NUMBER		
			GENERAL	COMPLIANCE TO THE	CITY STANDAF	אוו דטאוו ו UBE RDS	IIN	24 SHEF	4.0 (<u>)16</u>	50
									5 O)F 1	0

CITY ENGINEER

- Remove snow and frozen material and furnish specified а. materials that can be compacted to the specified density. Measure removed material and provide quantities to
 - the Engineer. The Department does not pay for removed material or 2) material replacement when it would otherwise meet
- specification requirements if unfrozen. Do not deliver or use frozen material.
- Use appropriate compaction equipment adjacent to pipes, abutments, C. back walls, approach slabs, wing walls, retaining walls, and other structures.
 - Expand the width of the trench to accommodate necessary 1.
 - compaction equipment.
 - 2. Compact by hand areas where compaction equipment cannot compact the soil.
- D. Compaction Requirements

2.

- Borrow, Drainage Pipe Bedding, Embankment Material, Embankment for Bridge, Granular Backfill Borrow and Granular Borrow
 - a. Compact each lift to a minimum average of 96 percent of maximum laboratory density with no single determination lower than 92 percent.
 - Use AASHTO T 180 Method D for A-1 soils and AASHTO T 99 Method D for all other soils to establish
 - maximum laboratory density. Maintain appropriate moisture for compaction during processing.
- Drainage Pipe Backfill 2.
- Compact each lift to a minimum average of 92 percent a. maximum laboratory density with no single determination less than 90 percent.
- Use AASHTO T 180 Method D for A-1 soils. Maintain appropriate moisture for compaction during processing.
- Meet the pavement section material density requirement for b. pipes that encroach into the pavement section or use flowable fill.
- 3. Material with more than 30 percent retained on the 3/4 inch sieve Compact each lift to 100 percent of the developed field density.
 - The Department develops a field density compaction curve according to UDOT Materials Manual of Instruction Section 989.
 - Embankment, Borrow, and Backfill
 - 02056 Page 5 of 8 2025 Standard Specifications Latest Revision: September 14, 2023
 - SECTION 02705

CONCRETE AND ASPHALT CUTTING

PART 1 GENERAL

- 1.1 SECTION INCLUDES
 - A. Saw or cut existing pavements, curb and gutter, sidewalk, and any appurtenances as required to provide a smooth surface to match.
 - Does not apply to new Portland cement concrete pavement (PCCP) joint В. sawing. Refer to Section 02752.
- 1.2 RELATED SECTIONS
 - A. Section 02748: Prime Coat/Tack Coat
 - Section 02752: Portland Cement Concrete Pavement B.
- 1.3 REFERENCES Not Used
- 1.4 DEFINITIONS Not Used
- 1.5 SUBMITTALS Not Used
- PART 2 PRODUCTS Not Used
- PART 3 EXECUTION
- 3.1 PROCEDURE CONCRETE SURFACES
 - A. Saw cut vertically in a straight line through the full depth of the surface.
 - B. Make cuts so the defective surface can be removed where the edge of the existing surface is cracked, broken, or deteriorated. Verify that the entire deficient areas are removed and will not propagate.
 - C. Do not allow traffic or construction equipment to cross the cut edge.

Concrete and Asphalt Cutting 02705 - Page 1 of 2

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E. 1. 2. 3.

4.

section.

A.

B.

C.

- excavation shown. 100 concrete.
- Maintain Drainage D. 2.
- Make cuts so the defective surface can be removed where the edge of the existing surface is cracked, broken, or deteriorated. Verify that the entire deficient areas are removed and will not propagate. C. Do not allow traffic or construction equipment to cross the cut edge.

Free-Draining Granular Backfill Compact each lift to 100 percent of the developed field density.

- The Department develops a field density compaction 1) curve according to UDOT Materials Manual of Instruction Section 989.
- Place an initial layer of granular material to act as a working platform over soft, wet ground when authorized by the Engineer.
 - Density requirements do not apply to the working platform except as specified in this Section, Paragraph 3.2 B.
 - Meet density requirements for embankment, borrow, or backfill placed above the working platform.
 - Do not place initial layer of embankment, borrow, or backfill until the Engineer inspects and verifies the working platform or foundation.

3.2 EMBANKMENT MATERIAL AND BORROW PLACEMENT

- Place embankment material or borrow or both in the embankment section with the highest quality material in the top portion of the embankment
- Scarify and compact the top eight inches of the working platform or foundation to at least 90 percent of maximum laboratory density when the embankment height is 6 ft or less.
- Break and scarify all underlying concrete pavement surfaces so that pieces do not exceed 1 ft² before placing material over an existing concrete pavement surface that is outside the limits of removal or
 - Remove other pavement surfaces that are not portland cement

Grade and maintain the roadway to provide adequate drainage. Maintain drainage pipes and drainage ditches or provide temporary facilities when interrupting items such as irrigation systems, sewers, and under-drains.

Embankment, Borrow, and Backfill

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3.2 PROCEDURE – ASPHALT SURFACES

- A. Use any method that provides a vertical cut in a straight line through the full depth of the surface.
 - 1. Saw cut if the method of cutting does not produce a smooth, nonbroken vertical edge.

D. Apply a tack coat to the cut edge before placing asphalt pavement when appropriate. Refer to Section 02748.

END OF SECTION

- Spread material uniformly in layers not exceeding 1 ft (uncompacted depth) and compact to the density requirements. Reduce the lift thickness or modify operations if tests show 1.
 - unsatisfactory density. Distribute larger particles so space exists for placing and
 - compacting remaining material. Do not place rocks or broken concrete larger than 4 inches within 1 3. ft of the subgrade surface.

3.6 FREE-DRAINING

1.4 DEFINITIONS

1.5 SUBMITTALS

1.6 ACCEPTANCE

- F. Finish subgrade surface within ±0.2 ft of line and grade.
- Do not use compacting equipment that causes shear failure in the G. constructed fill or backfill.

3.3 GRANULAR BORROW, GRANULAR BACKFILL BORROW, AND BACKFILL PLACEMENT

- Α. Compact material in maximum 6 inch layers (uncompacted depth) to the density requirement.
- B. Finish surface within ± 0.1 ft of line and grade.
- Backfill catch basins, cleanout boxes, manholes, drainage boxes, and diversion boxes with Granular Backfill Borrow unless otherwise specified or shown.

3.4 DRAINAGE PIPE FOUNDATION, BEDDING, AND BACKFILL PLACEMENT

- Place in 6 inch layers (uncompacted depth) and compact to the density A. requirement
- B. Place uniform layers of drainage pipe backfill on both sides of the pipe and compact to the density requirement before placing successive lifts.
- C. Fully compact the haunch areas.
- 3.5 EMBANKMENT FOR BRIDGE PLACEMENT
 - Construct bridge approach embankments from the existing ground up with the specified material to the limits defined in this Section and according to GW Series Standard Drawings.
 - Approach Embankments Place embankment for bridge beneath the bridge except a.
 - riprap or other described materials used for MSE walls.
 - Embankment, Borrow, and Backfill
 - 02056 Page 7 of 8 2025 Standard Specifications
 - Latest Revision: September 14, 2023

SECTION 02721

UNTREATED BASE COURSE (UTBC)

GENERAL PART 1

1.1 SECTION INCLUDES

1.

 Production, construction, and compaction of UTBC used for pavements, shoulders, and incidental construction.

1.2 RELATED SECTIONS

A. Section 01572: Dust Control and Watering

1.3 REFERENCES

- AASHTO T 11: Materials Finer than 75-µm (No. 200) Sieve in Mineral A. Aggregates by Washing
- B. AASHTO T 19: Bulk Density ("Unit Weight") and Voids in Aggregate
- C. AASHTO T 27: Sieve Analysis of Fine and Coarse Aggregates
- D. AASHTO T 89: Determining the Liquid Limit of Soils
- E. AASHTO T 90: Determining the Plastic Limit and Plasticity Index of Soils
- AASHTO T96: Resistance to Degradation of Small-Sized Coarse F. Aggregate by Abrasion and Impact in the Los Angeles Machine
- AASHTO T 180: Moisture-Density Relations of Solls Using a 4.54 kg (10 G. lb) Rammer and 457 mm (18 in) Drop
- H. AASHTO T 193: The California Bearing Ratio
- AASHTO T 255: Total Evaporable Moisture Content of Aggregate by Drying
- AASHTO T 335: Determining the Percent of Fracture in Coarse 1 Aggregate

Concrete and Asphalt Cutting

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			Know what's below. (1) Know what's below. (1) Know what's below. (1) Know what's below.	DATE	
			BLUE STAKES OF UTAH UTILITY NOTIFICATION CENTER, INC. www.bluestakes.org 1-800-662-4111	INIT	
	b. c.	Place embankment for bridge the centerline of the bridge a approach roadway alignment abutments. Use the described material th where retaining walls are loc	a to extend at least 150 ft from butment as measured along the and on the inside of proughout the length of the walls ated beyond this delineation.	CRIPTION	
	2. Int a.	ersecting Roadway Embankment Place embankment for bridge alignment(s) at least 150 ft fr station as measured along th alignments.	s along the intersecting roadway om the abutment centerline le approach and intersecting	NO. DES	
В.	Spread e (uncompa before pla 1. Re	mbankment for bridge uniformly i acted depth) and compact to the s acing the next layer. Induce the lift thickness if tests sho	n layers not exceeding 1 ft specified density requirements w unsatisfactory density.		-FICE W, Ste #25 8499 19.com
C.	Finish su	face within ±0.2 ft of line and gra	de.		TE OF 1 St S 1 WA 9 2900 2900
FRE	E-DRAININ	G GRANULAR BACKFILL PLA	CEMENT		ORA 100th 984- 984-
в.	Finish su	face within ±0.2 ft of line and gra	de.		CORF 5920 Lakev (253) beyle
				ƙ	BEYLER BEYLER CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTING CONSULTI
		Embankment, Borrow, and B 02056 – Page 8 of 8	ackfill		>
		Lates	2025 Standard Specifications at Revision: September 14, 2023		1015
					HINC
DEFI	NITIONS	Not Used			0 VASI /202
А.	Written rep minimum of 1. Agg 2. Nar 3. Max ass 4. Job and Tab	port for approval for each aggrega of five working days before placen regate suitability. Refer to this So ne of supplier and location of sou kimum Dry Density and Optimum ociated test result data. Refer to mix gradation including single va finer. The target values must be le 2.	ate class and source, a nent. Include the following: ection, Part 2. rce. Moisture Content and AASHTO T 180, Method D. Iues for each sieve size, No. 4 within the gradation limits of	LS SHEET 3	KET 186 INT PLANS M VERT: 3/19,
В.	Job-mix gr	adation changes		TAI	
ACCE	EPTANCE			DE	AA ROV RZ: RZ:
Α.	Type I Pla 1. Use 2. The moi den 3. Mee	cement – Pavement Section Class A aggregate, Table 1. Engineer takes random samples sture, gradation, and laboratory d sity determinations. et gradation limits and applicable	from the grade and tests for ensity and performs in-place tolerances of Table 2 for each	TES AND	CIVIL IMPR
	gra a. 4. Mee	dation test. Evaluate each sublot separate other sublots. at minimum density test average of	ly and do not average with of 97 percent of maximum	NO	
В.	Type II Pla Gutter, Dri Flatwork, a included a 1. Use 2. The moi	pratory density with no test less the reement – Incidental includes place veways, Pedestrian Access Ramp and other items of work in the con nd not measured or paid for sepa to Class A aggregate, Table 1. Engineer takes random samples sture, gradation, and laboratory d	an 94 percent. cement for Curb, Curb and ps, Sidewalk, Waterways, tract to which UTBC is rately. from the grade and tests for ensity and performs in-place		HYRUM CITY DESIGNED: DR. LCB/EJM EJM
	den 3. Mei grad a.	sity determinations. at gradation limits and applicable dation test. Each sublot will be evaluated a with other sublots	tolerances of Table 2 for each separately and not averaged		PLESSIONAL CAL
	4. Mee labo	et minimum density test average o pratory density with no test less th	of 95 percent of maximum an 92 percent.		N N 4959075
		Untreated Base Course (UTE 02721 – Page 2 of 5	C) 2025 Standard Specifications Latest Revision: June 8, 2023		ANDON C. BEYLER ATE OF UTATION
					3/19/2025
			I CERTIFY THAT I HAVE EXAMINED THIS PLAT AND FIND IT TO BE IN GENERAL COMPLIANCE TO THE CITY STANDARDS	^{јов}	NUMBER 4.00160

CITY ENGINEER

DATE

SHEET

6 OF 10

- Type III Placement Shoulder C. Use Class A or B aggregate, Table 1.
- Adjust moisture content before compaction Material not meeting the gradation requirements may be allowed to remain D. in-place at the discretion of the Engineer provided density requirements
 - are met. Additional lots may not be placed until the deficiencies are 1 addressed and corrected.
- Correct material that does not meet the specified criteria by scarifying, E. placing additional material, re-mixing, reshaping, and re-compacting when determined by the Engineer.
- F. Do not place additional material on any unaccepted layer.

PART 2 PRODUCTS

2.1 AGGREGATES

Well-graded, clean, hard, tough, durable, and sound mineral aggregates A. consisting of crushed stone, crushed gravel, or crushed slag, free of organic matter and contamination from chemical or petroleum products, according to Table 1. Table d

Anar	Table 1	lac	
Aggre	Aggreg	ate Class	
	A	В	1
Dry Rodded Unit Weight	Not less that	n 75 lb/ft ³	AASHTO T 19
Liquid Limit/Plastic Index	Non-plastic	PI≤6	AASHTO T 89 AASHTO T 90
Aggregate Wear	Not to exceed 50 percent		AASHTO T 96
Gradation	Table 2		AASHTO T 11 AASHTO T 27
CBR with a 10 lb surcharge measured at 0.20 inch penetration	70% Minimum	N/A	AASHTO T 193
Two Fractured Faces	50% Min	N/A	AASHTO T 335

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	G.	AASHTO T 90: Determining the Plastic Limit and Plasticity Index of Soils		2,	The maxim
	н.	AASHTO T 96: Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine		3.	The maximum 200 sieve
	ł.	AASHTO T 104: Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate		4.	No target section.
	J.	AASHTO T 112: Clay Lumps and Friable Particles in Aggregate	D.	Ove	rband – an 8 of final ridin
	к.	AASHTO T 176: Plastic Fines in Graded Aggregates and Soils by Use of		the I	Engineer
		the Sand Equivalent Test	E.	Proc	luction Day -
	L.	AASHTO T 195: Determining Degree of Particle Coating of Asphalt Mixtures	F.	RAF that	' – Recycled have been n
	M.	AASHTO T 209: Theoretical Maximum Specific Gravity and Density of Asphalt Mixtures	G.	Thin inch	Overlay Pares.
	N.	AASHTO T 255: Total Evaporable Moisture Content of Aggregate by Drying	н.	Lane long aggi	e-Leveling – itudinal varia regate size to
	0.	AASHTO T 304: Uncompacted Void Content of Fine Aggregate	4	Prof	ile leveling .
	Ρ.	AASHTO T 335: Determining the Percentage of Fracture in Coarse Aggregate	1-	the need	roadway. De ded to correc
	Q.	UDOT Materials Manual of Instruction 1.5	SUB	MITTA	LS
	R.	UDOT Minimum Sampling and Testing Requirements	Α.	Mix Mate	design for ve erials Manua
	S.	UDOT Quality Management Plans	P	Cha	nane in iob n
4	DEF	INITIONS	D.	1.	Submit a design
	A.	Longitudinal Joint – Any new asphalt lift abutting an existing paving lift. This includes joints created by echelon paving and new asphalt placed against a milled asphalt edge.			a. Alle mir b. Alle
	В.	Lot – The amount of Asphalt Mix placed in a single Production Day.		2.	Include do target cha
	C.	Minor Target Change – A change from the verified mix design gradation target on a maximum of two sieves with the following limitations.			a. Ac Co
		 The maximum change from the verified target gradation on the No. 		3.	Submit sa

Asphalt Mix 02741 - 2 of 22

8 or any coarser sieve is limited to 3 percent passing per sieve.

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B.

Sieve Size

1½ inch 1 inch ¾ inch 1/2 inch 3% inch No. 4 No. 16 No. 200

PART 3 EXECUTION

3.1 PREPARATION

	A,	Rem	iove ve
		1.	Prote
3.2	INST	TALLA	TION

В.

1.

Establish the job mix (target) gradation for the 3/4 inch sieve and finer within the gradation limits.

- The Job Mix Gradation Tolerance is the allowable deviation from the job mix (target) gradation on the applicable sieves. All other percents passing will be within the gradation limits. Refer
- to AASHTO T 11 and AASHTO T 27.

0	Gradation Limits	5
ł	Job Mix Gradation Target Band	Job Mix Gradation Tolerance
	100	
	90 - 100	±9.0
	70 - 85	±9.0
	65 - 80	±9.0
	55 - 75	±9.0
	40 - 65	±7.0
	25 - 40	±5.0
	7 - 11	±3.0

Percent passing based on total aggregate (dry weight) and fine and coarse aggregate with approximately the same bulk specific gravities.

- getation before Type III placement. Refer to Section 02231. tect existing delineators in place.
- A. Provide moisture content of ± 2 percent of optimum at the time of placement. Refer to AASHTO T 180, Method D and AASHTO T 255.
 - Procedures for Changing the Job-Mix Gradation Submit changes in writing 24 hours before placement for approval by the Engineer.
- C. Place in layers of uniform thickness and compact each layer to a thickness not to exceed a 6 inch depth. Do not place on any frozen surface. Refer to Section 01572.
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mum change from the verified target gradation on the No. 50 sieves is 2 percent passing per sieve. mum change from the verified target gradation on the No. is 0.5 percent passing. change may violate the mix design requirements in this

I inch protective asphalt coating sealing the longitudinal ing surface, as proposed by the contractor and approved by 1.6

- A 24 hour period in which Asphalt Mix is being placed.

Asphalt Pavement. Crushed or milled asphalt materials emoved from pavements for recycling.

avement – New Asphalt Mix design thickness less than 2

Variable depth paving to correct minor rutting and iations in the roadway. Depth varies from the maximum to the depth needed to correct variations.

Variable depth paving to correct minor profile variations in epth varies from the maximum aggregate size to the depth ect variations.

erification and approval before paving according to UDOT al of Instruction Section 960.

mix design

- written request for any proposed change in the job-mix
- llow at least 12 hours for approval before incorporating a inor target change into production. llow at least six working days for verification and approval
- any other change. ocumentation supporting correlation between suggested anges and mix design volumetric requirements. ceptable documentation may include Department or
- ontractor testing data. amples according to the UDOT Materials Manual of Instruction 960 for a volumetric mix design verification for anything other than approved minor target changes.

Asphalt Mix

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- D. Finish to a uniform line and grade with surface deviations no more than 3/8 inch in 10 ft in any direction.
 - Correct any profile deviations greater than % inch. Rework minimum of 4 inch lift to achieve homogeneous а.
 - density Determine limits of correction based on extent of deviation.
- Continue finishing until existing deviation is less than 3/4 inch. C. E. Maintain optimum moisture content ± 2 percent during compaction.
- Use appropriate compaction equipment adjacent to abutments, backwalls, approach slabs, wing walls, retaining walls, and other structures. Use a minimum of two passes with a roller for Type III placement or
- as directed by the Engineer.

END OF SECTION	1.2	REL	ATED SECTION
LID OF BEOTION		Α.	Section 01456
		В.	Section 02701
		C,	Section 02742
		D.	Section 02745
		E.	Section 02746
		F.	Section 02748
	1.3	REF	ERENCES
		Α.	AASHTO M 3
		в.	AASHTO R 3
		C.	AASHTO T 11 Aggregates by
		D.	AASHTO T 19
		E.	AASHTO T 27
		F.	AASHTO T 89

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	C.	Corrective action plan for approval according to this Section, Article 3.3, paragraph C2 and Article 3.4, paragraph A4b.	2.	Der a.
	D.	Refer to this Section, Article 3.4 for laboratory correlation submittals for information.		b.
	E.	Mat joint layout plan to the Engineer for review before placement.		5
5	ACC	CEPTANCE		С.
	Α.	Acceptance sampling and testing of material is according to UDOT Minimum Sampling and Testing Requirements.	3.	Thi
	101	Condution and conholt binder content		req
	Б.	 The Engineer evaluates a lot on the test results of four or more samples, except when only three samples can be taken. 		a.
		 Evaluate the lot using the number of tests "n" in Table 3. The Engineer informs the Contractor of the time and place of sampling not more than 15 minutes before sampling. 		
		 Increase sample sizes to accommodate validation or third-party testing as required. 		b.
	C.	Density and Thickness		
		 Obtain cores from the mat and longitudinal joint within two calendar days after the pavement is placed and according to UDOT Materials Manual of Instruction, Section 984. 		
		 a. The Engineer marks coring location for in-place mat density and longitudinal joint density cores. 		0.
		 Fill core holes with Asphalt Mix, SMA or high-asphalt-content cold mix and compact in thin lifts within 24 hours and before returning to traffic. 		
		c. The Department witnesses the coring operation, takes possession of the cores immediately, and begins testing the cores within 24 hours for density acceptance.		
		cores within 24 hours for density acceptance.		d.

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SECTION 02741

ASPHALT MIX

GENERAL

PART 1

Α.

Β.

1.1 SECTION INCLUDES

additives. An option to incorporate Reclaimed Asphalt Pavement (RAP) materials into Asphalt Mix. NS 6: Materials Dispute Resolution 1: Pavement Smoothness

2S: Project Specific Surfacing Requirements

Flexible pavement consisting of one or more layers of an asphalt mixture

comprised of aggregate, asphalt binder, hydrated lime, and other

5: Asphalt Material

6: Hydrated Lime

8: Prime Coat/Tack Coat

323: Superpave Volumetric Mix Design

35: Superpave Volumetric Design for Asphalt Mixtures

: Materials Finer Than 75 µm (No. 200) Sieve in Mineral y Washing

Bulk Density ("Unit Weight") and Voids in Aggregate

Sieve Analysis of Fine and Coarse Aggregates

9: Determining the Liquid Limit of Soils

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nsity Requirements

- The target for in-place density for the mat is 93.5 percent of Theoretical Maximum Specific Gravity except for thin overlay pavements.
- The target for in-place density for the longitudinal joint is 91.5 percent of the Theoretical Maximum Specific Gravity
- The target for in-place density is 92.5 percent of theoretical maximum specific gravity for thin overlay pavements. Do not take longitudinal joint cores for thin overlay pavements.
- ickness is evaluated with mat density cores. The thickness uirement may be waived when matching up to existing
- vement, curb and gutter for Pavement in or next to intersections. The Department accepts a lot for thickness when:
- 1) The average thickness is not more than 1/2 inch greater or 1/4 inch less than the total design thickness specified.
- 2) No individual sublot shows a deficient thickness of more than 1/2 inch.
- Excess Thickness The Engineer may allow excess
- thickness to remain in place or may order its removal. 1) The Department pays for 50 percent of the mix for material in excess of the +1/2 inch tolerance when excess thickness is allowed to remain in place.
- Deficient Thickness Place additional material where lots or sublots are deficient in thickness. 1) The Department pays for material necessary to reach
- specified thickness. 2) The Department pays for 50 percent of the mix for
- additional material over specified thickness necessary to achieve minimum lift thickness.
- Minimum compacted lift is 3 times the nominal maximum aggregate size.
- Thickness tolerances established above do not apply to leveling courses. 1) Check final surfaces in staged construction.
- e. Check thickness regularly with a depth probe during placement and take corrective action as necessary.

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CITY ENGINEER APPROVAL

I CERTIFY THAT I HAVE EXAMINED THIS PLAT AND FIND IT TO BE IN GENERAL COMPLIANCE TO THE CITY STANDARDS

CITY ENGINEER



Longitudinal Joint 4.

- a. The edge of a new asphalt mat may be removed for the
 - purpose of meeting longitudinal joint density requirements. The material wasted is still included in the payment.
 - Up to 3 inches for a confined edge is allowed. 2)
 - Up to 6 inches for an unconfined edge is allowed. 3)

D. The Department applies one Incentive/Disincentive for the lowest dollar value for Gradation/Asphalt Content, one Incentive/Disincentive for In-Place Mat Density, and one Incentive/Disincentive for Longitudinal Joint Density. The Engineer computes Incentives/Disincentives as follows for each lot

- 1. Compute incentive/disincentive for Gradation/Asphalt Binder and In-place Mat Density and Longitudinal Joint Density according to Table 1.
- Base the incentive/disincentive on Percent within Limit (PT) 2. computation using Tables 2, 3, and 4.
- Use lowest single PT value combined for gradation (each of the sieves) and asphalt binder content for calculating the gradation/asphalt binder content incentive/disincentive.
- Use Tables 2, 3, and 4 to determine PT for in-place Mat Density 4 and Longitudinal Joint Density.
- Meet PT of 88 or greater for in-place mat density or the Department does not pay incentives on joint density or gradation/asphalt binder content except for lane-leveling material.
- The Department pays or assesses the longitudinal joint density 6. incentive/disincentive per ton of Asphalt Mix placed adjacent to. and on the hot side of the longitudinal joint for each lift:
 - a. The incentive/disincentive will be calculated from the core densities taken from all abutting joints if the Asphalt Mix mat has a longitudinal joint on more than one side.
- E. The Department applies incentive/disincentive for smoothness according to Section 02701.
 - Refer to Section 02701 for smoothness requirements.

F. The Department rejects lots:

- 1. If the PT for any individual gradation measurement is less than 52 percent as shown in Table 1.
- If the PT for asphalt binder content or mat density measurement is 2. less than 60 percent as shown in Table 1.

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Ougliby Index Values (OIL or OI.) for Estimating Percent Within Limits										
PU or PL	n=3	n=4	n=5	n=6	n=7	n=8	n=10	n=12	n=15	n=20
100	1.16	1.50	1.75	1.91	2.06	2.15	2.29	2.35	2.47	2.56
99	1.16	1.47	1.68	1.79	1.89	1.95	2.04	2.09	2.14	2.19
98	1.15	1.44	1.61	1.70	1.77	1.80	1.86	1.89	1.93	1.97
97	1.15	1.41	1.55	1.62	1.67	1.69	1.74	1.77	1.80	1.82
96	1.15	1.38	1.49	1.55	1.59	1.61	1.64	1.66	1.69	1.70
95	1.14	1.35	1.45	1.49	1.52	1.54	1.56	1.57	1.59	1.61
94	1.13	1.32	1.40	1.44	1.46	1.47	1.49	1.50	1.51	1.53
93	1.12	1.29	1.36	1.38	1.40	1.41	1.43	1.43	1.44	1.46
92	1.11	1.26	1.31	1.33	1.35	1.36	1.37	1.37	1.38	1.39
91	1.10	1.23	1.27	1.29	1.30	1.31	1.32	1.32	1.32	1.33
90	1.09	1.20	1.23	1.24	1.25	1.25	1.26	1.26	1.27	1.27
89	1.08	1.17	1.20	1.21	1.21	1.21	1.21	1.21	1.22	1.22
88	1.07	1.14	1.16	1.17	1.17	1.17	1.17	1.17	1.17	1.17
87	1.06	1.11	1.12.	1.12	1.12	1.13	1.13	1.13	1.13	1.13
86	1.05	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
85	1,03	1.05	1.05	1.05	1.05	1.04	1.04	1.04	1.04	1.04
84	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00	1.00
83	1.00	0.99	0.98	0.97	0.97	0.96	0.96	0.96	0.96	0.96
82	0.98	0.96	0.95	0.94	0.94	0.93	0.93	0.92	0.92	0.92
81	0.96	0.93	0.92	0.91	0.90	0.90	0.89	0.89	0.89	0.88
80	0.94	0.90	0.88	0.87	0.86	0.86	0.85	0.85	0.85	0.85
79	0.92	0.87	0.85	0.84	0.83	0.83	0.82	0.82	0.82	0.81
78	0.89	0.84	0.82	0.81	0.80	0.79	0.79	0.78	0.78	0.78
77	0.87	0.81	0.79	.0.78	0.77	0.76	0.76	0.75	0.75	0.75
76	0.84	0.78	0.76	0.75	0.74	0.73	0.72	0.72	0.72	0.72
75	0.82	0.75	0.73	0.72	0.71	0.70	0.69	0.69	0.69	0.68
74	0.79	0.72	0.70	0.68	0.67	0.67	0.66	0.66	0.66	0.65
73	0.77	0.69	0.67	0.65	0.64	0.64	0.62	0.62	0.62	0.62
72	0.74	0.66	0.64	0.62	0.61	0.61	0.60	0.59	0.59	0.59
71	0.71	0.63	0.60	0.59	0.58	0.58	0.57	0.56	0.56	0.56
70	0.68	0.60	0.58	0.56	0.55	0.55	0.54	0.54	0.54	0.53
69	0.65	0.57	0.55	0.54	0.53	0.52	0.51	0.51	0.51	0.50
68	0.62	0.54	0.52	0.51	0.50	0.50	0.48	0.48	0.48	0.48
67	0.59	0.51	0.49	0.48	0.47	0.47	0.46	0.45	0.45	0.45
66	0.56	0.48	0.46	0.45	0.44	0.44	0.43	0.42	0.42	0.42
65	0.53	0.45	0.43	0.42	0.41	0.41	0.40	0.40	0.40	0.39
64	0.49	0.42	0.40	0.39	0.38	0.38	0.37	0.37	0.37	0.37
63	0.46	0.39	0.37	0.36	0.35	0.35	0.35	0.34	0.34	0.34
62	0.43	0.36	0.34	0.33	0.33	0.33	0.32	0.31	0.31	0.31
61	0.39	0.33	0.31	0.30	0.30	0.30	0.29	0.29	0.29	0.28
60	0.36	0.30	0.28	0.27	0.26	0.26	0.25	0.25	0.25	0.25
59	0.32	0.27	0.25	0.25	0.24	0.24	0.24	0.23	0.23	0.23

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3. Section 01456. b.

G.

H.

1. visually.

1.7 DISPUTE RESOLUTION

A. acceptance tests.

Table 3 Continued										
PU/PL	n=3	n=4	n=5	n=6	n=7	n=8	n=10	n=12	n=15	n=20
58	0.29	0.24	0.23	0.22	0.21	0.21	0.21	0.21	0.21	0.20
57	0.25	0.21	0.20	0.19	0.19	0.19	0.18	0.18	0.18	0.18
56	0.22	0.18	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15
55	0.18	0.15	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13
54	0.14	0.12	0.11	0.11	0.11	0.11	0.10	0.10	0.10	0.10
53	0.11	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
52	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05
51	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Definitio)
Term	
Target Value (TV)	

Average (AVE)

Standard Deviations (s)

Upper Limit (UL)

Lower Limit (LL)

Upper Quality Index (QU) Lower Quality Index (QL) Percentage of Lot Within UL (PU) Percentage of Lot Within LL (PL)

Total Percentage of Lot Within UL and LL (PT) Incentive/Disincentive

The Engineer may accept a reject or non-conforming lot. Refer to A price reduction of 35 percent of the pay item or \$20 per ton, whichever is greater, will be assessed.

The lot will not be eligible for any incentive. The Engineer may elect to accept material on visual inspection according to the Minimum Sampling and Testing Requirements.

Incentives/Disincentives are not applied to material accepted

The Engineer reserves the option of conducting any acceptance tests necessary to determine that the material and workmanship meets the project requirements.

Meet production control requirements of Table 9. Material placed within the Cease Production Limit in Table 9 is not eligible for incentives.

Refer to Section 01456 when disputing the validity of the Department's

Table 1 Incentive/Disincentive for Asphalt Binder Content, and Mat Density Incentive/Disincentive (Dollars/Ton) PT Based on Min. Four Samples 2.00 96-99 1.50 92-95 1.00 88-91 0.00 84-87 -0.26 80-83 -0.60 76-79 -0.93 72-75 -1.27 68-71 -1.60 64-67 -1.93 60-63 -2.27 <60 Reject Incentive/Disincentive for Gradation Incentive/Disincentive (Dollars/Ton) PT Based on Min. Four Samples 2.00 1.50 96-99 92-95 1.00 0.00 88-91 84-87 -0.26 80-83 -0.60 76-79 -0.93 72-75 -1.27 -1.60 68-71 64-67 -1.93 -2.27 -5.00 60-63 56-59 52-55 -10.00 <52 Reject Incentive/Disincentive for Longitudinal Joint Density PT Based on Min Four Samples Incentive/Disincentive (Dollars/Ton) 2.00 1.50 96-99 1.00 92-95 88-91 0.00 84-87 -0.26 80-83 -0.60 76-79 -0.93 72-75 -1.27 -1.60 68-71 -1.93 64-67 -2.27 60-63 56-59 -2.60 52-55 -5.00 <52 Apply \$5 penalty and Overband Longitudinal Joint if Final Surface Lift

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	Table 4
ons, A	bbreviations, and Formulas for Acceptance
	Explanation
	The target values for gradation and asphalt binder content are given in the Contractor's volumetric mix design. See this Section, Article 1.6 for density target values.
	The sum of the lot's test results for a measured characteristic divided by the number of test results-the arithmetic mean.
(s)	The square root of the value formed by summing the squared difference between the individual test results of a measured characteristic and AVE, divided by the number of test results minus one.
	The value above the TV of each measured characteristic that defines the upper limit of acceptable production. (Table 2)
	The value below the TV of each measured characteristic that defines the lower limit of acceptable production. (Table 2)
(QU)	QU = (UL - AVE)/s
(QL)	QL = (AVE - LL)/s
ithin	Determined by entering Table 3 with QU.
ithin	Determined by entering Table 3 with QL.
Lot T)	PT = (PU + PL) - 100

Determined by entering Table 1 with PT or PL.

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PART 2 PRODUCTS

2.1 ASPHALT BINDER

- A. Project Specific Surfacing Requirements Refer to Section 02742S.
- Asphalt Material Refer to Section 02745 and Quality Management Plan 509: Asphalt Binder.

2.2 AGGREGATE

- A. Crusher produced virgin aggregate material consisting of crushed stone, gravel, or slag.
- B. Refer to Table 5 to determine the suitability of the aggregate. 1. Coarse aggregates
 - Retained on No. 4 sieve, AASHTO T 27 Fine aggregates
 - Clean, hard grained, and angular Passing the No. 4 sieve, AASHTO T 27 b.

C. Meet the gradation requirements in Table 6. (AASHTO T 11, AASHTO T 27)

Test Method One Fractured Face Two Fractured AA Faces Fine Aggregate Angularity Flakiness Index (E L.A. Wear Sand Equivalent alte pre

Plasticity Index AA Unit Weight A/ Soundness (sodium sulfate) Clay Lumps

and Friable Particles Natural Fines Aggregate Sie

Control Sieves

	 	_

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Know what's **below**. **Call 811** before you dig. **BLUE STAKES OF UTAH** www.bluestakes.org 1-800-662-4111

Table 2	12
Upper and Lower Limit I	Determination
Parameter	UL and LL
% inch sieve for ½ inch Asphalt Mix No. 4 sieve for % inch Asphalt Mix	Target Value ± 6.0%
No. 8 sieve	Target Value ± 5.0%
No.50 sieve	Target Value ± 3.0%
No. 200 sieve	Target Value ± 2.0%
Asphalt Binder Content	Target Value ± 0.35%
Mat Density	Lower Limit Target Value - 2.0% Upper Limit Target Value + 4.0%
Longitudinal Joint Density	Lower Limit Target Value - 2.0% Upper Limit Target Value + 6.0%

Asphalt Mix	
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Aggregate	Properties - Asphalt	Mix
Test No.	75 Design Gyrations and Greater	Less Than 75 Design Gyrations
SHTO T 335	95% minimum	90% minimum
SHTO T 335	90% minimum	90% minimum
SHTO T 304	45 minimum	45 minimum
OT MOI 933 ased on % inch ve and above)	17% maximum	17% maximum
SHTO T 96	35% maximum	40% maximum
SHTO T 176, emate method 2, -wet method st the sample in wet condition).	60 minimum	45 minimum
SHTO T 89 and 0	0	0
SHTO T 19	minimum 75 lb/ft ³	minimum 75 lb/ ft ³
SHTO T 104	16% maximum loss with five cycles	16% maximum loss with five cycles
SHTO T 112	2% maximum	2% maximum
N/A	0%	10% maximum

Table 6

% inch
100.0
90.0 - 100.0
< 90
32.0 - 67.0
2.0 - 10.0

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CITY ENGINEER APPROVAL

I CERTIFY THAT I HAVE EXAMINED THIS PLAT AND FIND IT TO BE IN GENERAL COMPLIANCE TO THE CITY STANDARDS

CITY ENGINEER

DATE



3.8 LIMITATIONS

- A. Do not place Asphalt Mix on frozen base or subbase or during adverse climatic conditions such as precipitation or when roadway surface is icy or wet
- B. Use a release agent that does not dissolve asphalt and is satisfactory to the Engineer for all equipment and hand tools used to mix, haul, and place the Asphalt Mix.
- C. Place Asphalt Mix from April 15 through October 15, and when the air temperature in the shade and the roadway surface temperature are above 50 degrees F. The Department determines if it is feasible to place Asphalt Mix 1.
 - outside these dates and temperature limits. 2. Obtain authorization from the Engineer before paving outside these requirements.

END OF SECTION

		application of, chip seal cover
1.2	REL	ATED SECTION
	A.	Section 027428
	В.	Section 02745:
	C.	Section 02748:
1.3	REF	ERENCES
	Α.	AASHTO T 11: Aggregates by
	в.	AASHTO T 19:
	C.	AASHTO T 27:
	D.	AASHTO T 96: Aggregate by A
	E.	AASHTO T 104 Magnesium Su
	F.	AASHTO T 278 Tester
	G.	AASHTO T 279 Wheel
	н.	AASHTO T 335 Aggregate

C.

D.

E.

PART 3 EXECUTION

3.1 PREPARATION

Α.

C.

D.

2

3.2 LIMITATIONS

Β.

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2.6 EQUIPMENT

- Use distributor trucks with the following: Α.
 - Tachometer, pressure gauges, accurate volume measuring devices or a calibrated tank, and a thermometer for measuring temperatures of the tank contents. Insulated tanks capable of storing the binder at temperatures that
 - allow the binder to remain consistent with the appropriate viscosity for proper application rates. a. Use tanks equipped with baffles to prevent pressure surges
 - resulting from the asphalt sloshing in the tank when starting and stopping. Use trucks equipped with devices to provide for accurate
 - control of the amount of bituminous material being applied. Constant volume circulation pumps and heaters to maintain a 3.
 - pressurized system so binder will be uniformly heated. Circulation pump must spray a constant volume for the entire a. length of the spray bar for each application.
 - Spray bar and nozzles designed to provide an appropriate fan width 4. to provide uniform transverse distribution without corrugation or
 - streaking. Adjust the spray bar height to provide uniform distribution of binder across the application width and triple lapping of the binder on the pavement surface.
 - Use a fully circulating spray bar with a positive shutoff valve. Computerized rate control system allowing the operator to control 5
 - all distributor operations from the cab to include: a. Pressure regulation of the material application and automatic rate control adjustment to the unit ground speed.
 - 1) Hydrostatic system capable of maintaining a tolerance of ± 0.03 gal/yd2.
 - Spray bar height and width adjustment and shut off of b. individual spray bar sections.

В. Use a self-propelled aggregate (chip) spreader specifically designed and manufactured for chip seal operations, equipped with the following: Computerized controls that will apply a uniform, even layer of

- aggregate across the full width of the binder and adjust output to the unit ground speed. Use gates adjustable to drop the correct amount of
- aggregate plus or minus 1 lb/yd2. Variable width spreader with hydraulic control extension and
- 2. adjustable discharge gates. 3. Spreading hopper with a minimum capacity to cover a full lane of
- travel plus 1 ft/pass. Spinner broadcast type of aggregate spreader not allowed.
 - Chip Seal Coat
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SECTION 02785

CHIP SEAL COAT

1.1 SECTION INCLUDES

GENERAL

PART 1

A.

Materials and procedures for applying emulsified asphalt, followed with an either a standard chip seal cover material or lightweight r material and bituminous flush coat.

S: Project Specific Surfacing Requirements

- Asphalt Material
- Prime Coat/Tack Coat
- Materials Finer Than 75 µm (No. 200) Sieve in Mineral Washing
- Bulk Density (Unit Weight) and Voids in Aggregate

Sieve Analysis of Fine and Coarse Aggregates

Resistance to Degradation of Small Size Coarse Abrasion and Impact in the Los Angeles Machine

Soundness of Aggregates by Use of Sodium Sulfate or Ifate

8: Surface Frictional Properties Using the British Pendulum

9: Accelerated Polishing of Aggregates Using the British

Determining the Percentage of Fracture in Coarse

Chip Seal Coat 02785 - Page 1 of 9

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Use at least three articulating type pneumatic rollers for rolling operations. Use rollers weighing between 8 tons minimum and 12 tons maximum with a minimum width of 6 ft.

- Use rollers with pneumatic tires of equal size diameter and having treads satisfactory to the Engineer.
- Inflate tires so that the entire roller width area is compacted by the rear-axle tires and the front-axle tires.
- Inflate tires to 90 lb/in², or lower with permission from the Engineer.

Maintain tire pressure within 5 lb/in².

Sweeping Equipment

Use rotary brooms with nylon or steel bristles or pickup or vacuum brooms for pavement cleaning or brooming operations.

Blotter Material Equipment

Apply blotter material using a truck mounted spinner broadcast spreader.

Clean the road surface of all dirt, sand, dust, and other objectionable material to the satisfaction of the Engineer.

Protect structures including but not limited to guardrail, guideposts, concrete barriers, drains, and parapets.

Protect manholes, valve boxes, drop inlets, and other service utility entrances before placing any chip seal coat.

Stockpile blotter material with a quantity of at least 0.25 lb/yd² for the

production day. Blotter material must be ready to be spread within 20 minutes of a road section being chip sealed. Use blotter material, as needed to cover up oil if it bleeds through the new chip seal.

A. Complete all work between May 15, and August 31.

Do not place chip seal coat if surface moisture is present.

Chip Seal Coat

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UDOT Materials Manual of Instruction (MMOI) 1.4 DEFINITIONS Not Used

1.5 SUBMITTALS

- Test reports for information that the cover material and emulsion meets Α. requirements of this Section, Part 2.
- Equipment Calibration information including verifying asphalt application В. rates and chip application for information.
- C. Documentation verifying daily asphalt application rates and chip application for information.
- D. Vendor's bill of lading upon delivery for each emulsion used on the project for information This bill of lading should certify if the emulsion was diluted or not 10 according to this Section, Part 2.
- PART 2 PRODUCTS

2.1 CATIONIC EMULSIONS

- A. CRS-2A according to Section 02745.
- B. CRS-2P according to Section 02745.
- C. LMCRS-2 according to Section 02745.

2.2 HIGH FLOAT EMULSIONS

- A. HFRS-2P according to Section 02745.
- HFMS-2 according to Section 02745.
- C. HFMS-2P according to Section 02745.

2.3 FLUSH COAT

A. Use the emulsion as specified in Special Provision 02742S, diluted two parts concentrate to one part water by the manufacturer.

Chip Seal Coat 02785 - Page 2 of 9

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	C.	Chip	o seal coat application:	3.4	ASPH	ALT	MATERIAL/CO
		1.	Place when the pavement temperature is between 70 and 136				
		1.000	dearees F.		A.	Appl	v asohalt materi
		2	Place when the air temperature is between 50 and 110 degrees F.		17.57	emb	edment before ti
		3.	Do not apply after 6:00 pm if the temperature is expected to be			after	rolling operation
			below 50 F during the night			1.	Adjust applica
		4	Place when the forecasted temperature is not expected to be below			1.10	existing condi
			40 degrees F within 3 days after placement				bridding oonal
					B	Appl	v the asphalt em
	E	Dor	not open to traffic the same day chip seal coat is placed on Interstate				, are aspirate on
	Contract of	rout	es.		C.	Don	ot apoly asphalt
		1.	Sweep chip seal to remove unbound aggregates prior to opening to			distri	butor in a unifor
			traffic				
			a arris,		D.	Plac	e building paper
	F	Allo	wat least 48 hours after completing application of cover material			start	ing each spravin
	2055	befo	and applying bituminous flush coat material.			1	Maintain the o
		1	Applying situation does not material when the air temperature in				and cut- off
			the shade is at least 50 degrees F and the navement temperature				and out on.
			is at least 70 degrees F		F	loca	te lonaitudinal ir
		2	Do not apply bituminous flush coat material during fog, rain, or			1	Construct me
		6	other adverse conditions			14.4.5	nassas
						2	Do not place :
33	COV	ER M	ATERIAL STOCKPILE			f ar •	Do not place i
0.0					F	Calib	rate the snread
	Δ.	Con	struct individual 500 ton stockolles for anorenates			as n	ecessary to com
	0.	1	Construct on a clean base to minimize contamination			1	Maintain a dis
		2	Construct to facilitate uniform dampening			1002	distributor and
		3	Avoid excess moisture			2	Maintain the
		· • •				Sec. 1	TAICHT FIGHT FIG C

- Combining, altering, or moving accepted stockpiles may require 4 retesting by the Engineer before use.
- Notify the Engineer at least seven calendar days before placement in В. order for the initial stockpiles to be sampled and tested for acceptance.
- Obtain the Engineer's acceptance of a stockpile before use. C.
- D. Rework or remove material not meeting specifications from the stockpile area. Identify stockpiles that will be reworked.

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2.4 COVER MATERIAL

1.

2.

Test

*Unit Weight

Face

Faces

LA wear

One Fractured

Two Fractured

Soundness

Stripping

Polishing

В.

Sieve

Size

1/2 in % in

No. 4 No. 8

No. 16 No. 200

Flakiness Index

Sta Typ

10

0 -

0.

Meet the requirements of Table 1

Use crusher processed virgin aggregate consisting of natural stone, gravel, or slag for standard chips. Use crusher-processed rotary-kiln lightweight expanded shale chips for lightweight chips.

Chip Seal Cover	Material Properties		
Test Method	Standard Chip Seal Type I & II	Lightweight Chip Se Type I &II	
AASHTO T 19	100 lb/ft ³ , max	60 lb/ft ³ , max	
AASHTO T 335	95% minimum	N/A	
AASHTO T 335	90% minimum	N/A	
AASHTO T 96	30% maximum	30% maximum	
AASHTO T 104	10% maximum	10% maximum	
Materials MOI 933	17 maximum	25 maximum	
Materials MOI 945	10% maximum	10% maximum	
AASHTO T 278, T 279	31 minimum	31 minimum	

This requirement may performance as determined by the Engineer.

Meet gradation limits in Table 2. Refer to AASHTO T 27 and T 11.

		Table 2	
	Grad	ation Limits	
		Percent Passing	
ndard	Aggregate	Lightweig	ght Aggregate
el	Type II	Type I	Type II
	100 - 98	100	100 - 90
0	69 - 91	80 - 100	55 - 80
15	0 - 11	5 - 40	0 - 10
	0-6	0 - 20	0-3
	0.00000	0 - 10	
1	0-1.5		0-2

2.5 BLOTTER MATERIAL

A. Refer to Section 02748.

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IATERIAL/COVER MATERIAL APPLICATION

asphalt material at a rate sufficient to obtain 50 percent chip ment before the rolling operation and 70 percent chip embedment olling operation.

- Adjust application rates throughout the project depending on existing conditions.
- the asphalt emulsion at a minimum temperature of 145 degrees F.
- apply asphalt material if material does not spray through the utor in a uniform way and remain in place on the roadway.
- building paper adjacent to the transverse construction joint before g each spraying operation. Maintain the control valve to act instantaneously both at start-up
- longitudinal joints within 6 inches of the traffic lane line location. Construct meet lines with no skip or voids between adjacent
- Do not place a double thickness of cover material.

ate the spreader at the beginning of each day and as often essary to comply with Table 3.

- Maintain a distance of less than 150 ft between the
- distributor and the chip spreader. Maintain the chip spreader speed so that chips do not bounce or roll during application.

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I CERTIFY THAT I HAVE EXAMINED THIS PLAT AND FIND IT TO BE IN GENERAL COMPLIANCE TO THE CITY STANDARDS

CITY ENGINEER

DATE

IIT DATE						
NI II						
VO. DESCRIPTION						
2			CORPORATE OFFICE 5000 100th Ct CW Cto #05	Lakewood, WA 98499		beylerconsulting.com
		REVIER	CONSULTING	Plan. Design. Manage	CIVIL & STRUCTURAL ENGINEERING LAND SURVEYING PROJECT MANAGEMENT PLANNING & FEASIBILITY	PERMITTING SERVICES CONSTRUCTION MANAGEMENT
EET 6	1020	ΠΟΟΤ	INS	WASHINGTON	DATE:	3/19/2025
ID DETAILS SH	MADVET	I J V V F I	IPROVEMENT PLA		SCALE:	HORZ: VERT:
NOTES AN	MIION	MOY	CIVIL IN		N: CHECKED:	LCB
				YRUM CITY	SIGNED: DRAM	'B/EJM EJM
Contraction of the second	A CONTRACTOR	AND BEY	AL 3907 ON C 1LER	AH 75	DE: DE:	TCF
јов 2 SHE	NUM 2 4. ET 9	BER 0 C	02)F	1 <i>6</i> 1	5 <i>C</i> 0)

	Table 3				
	Approximate Spread Rates				
2	Unit Weight Ibs/ft ³	Application Rate Ibs/yd ²			
Lightweight Type I Chip Seal	45 - 50	9.6			
	50 - 55	10.6			
	55 - 60	11.6			
Lightweight Type II Chip Seal	45 - 50	11.8			
	50 - 55	13.1			
	55 - 60	14.3			
Standard Chip Seal	60 - 65	17.0			
	65 - 70	18.4			
Г	70 - 75	19,8			
	75 - 80	20.7			
Г	80 - 85	22.1			
F	85 - 90	23.5			
F	90 - 95	24.9			
	95 - 100	25.8			

3.5 SURFACE ROLLING

A. Use at least three pneumatic-tire rollers in a longitudinal direction to roll surface after the cover material has been spread.

B. Roll at least three passes to seat the cover material. 1. A pass is defined as traveling in one direction only.

Control bleeding with blotter material and as determined by the Engineer. C.

D. Set the roller speed to prevent bouncing or skidding.

Do not exceed 5 mph. Reduce roller speeds during directional changes to prevent surface 2. tearing.

E. Synchronize the speed of the distributor and chip spreader with that of the rolling operation.

- Begin initial rolling, consisting of one complete coverage, 1.
- immediately behind the chip spreader. Begin secondary rolling, consisting of second and third coverage, 2.
- immediately after completing initial rolling.
- Synchronize all operations to keep rolling operations within 2,500 3. feet of the ongoing chip seal application.

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- F. Sweep excess cover material off the roadway after the emulsion has set.
 - before opening the roadway to traffic. Keep downward pressure of broom to a minimum.
 - Use water as requested by the Engineer if excessive dust is
 - generated during sweeping operations.
 - of the shoulder. 5. roadway.

G. Repair all damage to the seal coat before opening the roadway to traffic.

3.6 BITUMINOUS FLUSH COAT APPLICATION

- A. Clean the surface of all dirt, sand, dust, loose chips, and other objectionable material to the satisfaction of the Engineer before applying bituminous flush coat.
- B. Apply the bituminous flush coat at a rate of 0.11, ±0.01 gal/yd². set sufficiently to prevent tracking or pick-up.

3.7 PAVEMENT MARKING PAINT

A. Allow at least 24 hours after completing flush coat before applying permanent pavement markings.

END OF SECTION

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		TAE	SLE 1		
MINIMUM DEPTH	H OF BURY TO TO	OP OF UTILITY (I	ONGITUDINAL	AND CROSSING I	NSTALLATIONS
LOCATION	UNDER PRVEMENT	UNDER SICEWALK	UNDER DITCH (NOTE 5)	LOCATION < 20 FT FROM EDGE OF PRVEMENT	LOCATION > 20 FT FROM EDGE OF PW/EMENT
DEPTH	4 FT BELOW TOP OF PWVEMENT	3 FT BELOW TOP OF SIDEWALK	3 FT BELOW FLOW LINE	S-FT BELOW MATURAL GRADE	3 FT BELOW NATURAL GRADE







Statistics								
Description	Symbol	Avg	Max	Min	Max/Min	Avg		
Parking	+	1.0 fc	4.0 fc	0.0 fc	N/A	N,		
Patio	+	11.1 fc	15.5 fc	5.9 fc	2.6:1	1.9		
Property Boundary	+	0.1 fc	0.2 fc	0.0 fc	N/A	N,		
Sidewalk	+	2.5 fc	19.8 fc	0.0 fc	N/A	N		