1.0 | Project Summary Information

1.1 Project Name (35 letters max) 700 North Connection

1.2 Project Type Road - New Construction

1.3 Limits (descriptions should be identifiable. i.e: intersections, place names, landmarks, 35 characters max) 100 East to 200 East

1.4 Project Description (summary of project) Construction of 700 North between 100 East and 200 East to complete a regional east and west connection.

1.5 Sponsor (jurisdiction, agency name) American Fork City

1.6 Project Manager Nestor Gallo
   Office Phone 801-763-3060               Cell Phone 801-404-7969
   Fax 801-763-3005                      Email ngallo@afcity.net

1.7 Total Project Cost (includes local match and additional funds) $1,923,000
   PE Cost $83,000
   ROW Cost $312,000
   Construction Cost $1,118,000

   Funds already available to project (less local match) $250,000 from UDOT for a signal and $272,000 from American Fork by the purchase of the parcel that 700 North will travel through.

   MPO Federal Funds Request (includes 6.77% local match) $1,401,000

1.8 Local/Regional Significance
   Is project in local general plan? Yes
   Is project in MPO transportation plan? No
   Is project on a corridor on the Utah State Functional Class Map? Yes

1.9 Air Quality Benefit (summarize CM/AQ Report, NA for non-CM/AQ eligible projects) NA
1.10 Leadership Approval (local=mayor, manager, commissioner; state=dept. head). Acknowledges knowledge, support and approval to submit project to Mountainland.
2.0 | Project Scope
Enter NA for answers to questions not applicable to your project.

2.1 Describe purpose and need of project.
This project will complete the connection of 700 North Street through American Fork and will provide a direct route east and west from Canyon Road in Pleasant Grove on the east to 900 West of American Fork on the west. The project will complete a major collector and improve accessibility of land east of 100 East in American Fork to I-15. Some intersection improvements will also be included in the project to prepare the intersections for future signals.

2.2 Describe existing service/conditions
There are currently only two streets that provide a direct route from the west side of American Fork and Pleasant Grove to the interstate. These streets are Main Street and 300 North. 700 North provides a route from the west as far as 100 East, where it stops and continues to the east at 200 East. In order for vehicles traveling west on 700 North to access the interstate, they must eventually go south until 300 North or Main Street in order to continue westward.

2.3 Highway Project Information

<table>
<thead>
<tr>
<th>SR# or FA#</th>
<th>FA-2922</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Mile Post</td>
<td>1.35</td>
</tr>
<tr>
<td>End Mile Post</td>
<td>1.49</td>
</tr>
<tr>
<td>Length of project</td>
<td>Approximately 750 LF</td>
</tr>
<tr>
<td>Existing number of Travel Lanes</td>
<td>2</td>
</tr>
<tr>
<td>Width of facility.</td>
<td>56’</td>
</tr>
<tr>
<td>Facility surface type.</td>
<td>Concrete sidewalk, 5’ landscape strip, asphalt road, and asphalt 10’ trail</td>
</tr>
</tbody>
</table>

2.4 Transit / Pedestrian Facility Project Information

| Route# | NA |
Length of project
Approximately 750 LF

What is the expected use of the facility or program?
Bicycles and pedestrians are expected to use the trail and sidewalk. School buses are also expected to use this roadway.

What services are provided in the operating of this project?
A safe pedestrian and bicycle path along this segment of 700 North as well as direct school bus access along 700 North.

2.5 Describe any equipment to be purchased (buses, ITS, etc.).
There will be a conduit that will be installed under 700 North along 100 East for the ITS.

2.6 Describe how project is consistent with local plans.
The proposed connection of 700 North is one of the road projects approved by the City Council as part of the American Fork City Transportation Master Plan.

2.7 Describe how project is consistent with Utah County ITS plan.
A conduit is being installed underneath 700 North along 100 East.

2.8 If phased or segmented, describe how the phase has logical termini and what will future phases consist of.
This is the only remaining segment of 700 North and it is a short segment, so there is no phasing of this project.

2.9 Is project being coordinated with or constructed with a larger project?
The project is being coordinated with a project UDOT is doing to improve 100 East from Main Street to 700 North.

2.10 Describe how project will alleviate congestion on this or other facilities.
This direct route east and west through American Fork will alleviate congestion on 300 North and Main Street.

2.11 Describe any traffic improvements. (i.e lanes, signal coordination, ITS, turn lanes, bus pullouts, etc.)
The project will construct 700 North between 100 East and 200 East. 700 North will be built with 42’ of asphalt, a 5’ planter strip, a 4’ sidewalk on the north side of the street, and a 10’ trail on the south side of the street.

2.12 Describe any safety improvements for vehicular and pedestrian traffic. (i.e. raised median, channelization of turn movements, barriers, parkway strips, etc.)
This connection replaces the need for vehicular and pedestrian traffic to use 600 North to go east or west, which is extremely steep at 100 East.
2.13 How are complete streets addressed with this project? (plan for pedestrians, bikes, transit, trails, ITS)
The roadway will be built with curb, gutter, sidewalk, and a trail. The roadway will be built to a width to allow a traffic signal at 100 East without needing additional widening or improvements. The slopes on 700 North are designed so that school buses will be able to incorporate this road into their route. The street will give full function for vehicles, bicyclists and pedestrians.

2.14 Describe traffic control changes at intersections. (include info to warrant changes)
It is expected that a traffic signal will be needed at 100 East and 700 North. This intersection is expected to meet warrant due to the intersection of two major routes of the roadway network (MUTCD Section 4C.09 Warrant 8, Roadway Network). Both roadways are major routes as 100 East is a state highway and 700 North is a major collector that traverses the city. After 700 North is constructed, it is expected that traffic volumes will increase significantly and will meet warrant for a traffic signal.

The intersection at 700 North and 200 East is expected to be stop-controlled in the north/south direction.

2.15 What right-of-way is already secured?
No right-of-way has been purchased for this project

2.16 What additional right-of-way is needed?
The City is in the process of purchasing the parcel that 700 North will go through. This will provide all the right-of-way needed for the street and the cut and fill easements.

About 600 square feet amount of right-of-way will be needed around 100 East for undergrounding of power lines and improving the intersection for a signal. An additional 600 square feet of right-of-way is also needed at the intersection of 200 East and 700 North to improve the intersection.

2.17 Describe utility work to be performed and indicate who will do the work.
There will be some undergrounding of power to light poles, which will be performed by Rocky Mountain Power. There will also be some utility relocations, which will be performed by the applicable utility companies. We do not anticipate the need for city utilities in the street.
2.18 What type of environmental work will most likely be needed?
Categorical Exclusion

2.19 Facility Design

<table>
<thead>
<tr>
<th></th>
<th>Current Conditions</th>
<th>Design Year 2023</th>
<th>Design Year w/o Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Traffic</td>
<td>0</td>
<td>9,700</td>
<td>0</td>
</tr>
<tr>
<td>Level of Service</td>
<td>NA</td>
<td>D</td>
<td>NA</td>
</tr>
<tr>
<td>Functional Class</td>
<td>NA</td>
<td>Major Collector</td>
<td>NA</td>
</tr>
<tr>
<td>Design Speed</td>
<td>NA</td>
<td>30 mph</td>
<td>NA</td>
</tr>
<tr>
<td>*Accident Rate</td>
<td>NA</td>
<td>Unknown</td>
<td>NA</td>
</tr>
<tr>
<td>Transit Ridership</td>
<td>NA</td>
<td>Once constructed, it could become a school bus route.</td>
<td>NA</td>
</tr>
<tr>
<td>Ped/Trail Usage</td>
<td>NA</td>
<td>It could potentially provide a trail connection for 50 to 80 pedestrians per day.</td>
<td>NA</td>
</tr>
<tr>
<td>Park and Ride Usage</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
3.0 | Project Ranking
The following categories will be used by MPO staff to score each project. The points associated with each category show what total points MPO staff can give. MPO staff’s recommendations will be made available to the MPO TAC Committee for their use in making final project selection recommendations. MPO staff ranking is a tool to aid the MPO TAC Committee in their final selection. The committee is not required to pick projects solely on MPO staff ranks. Please note, if questions pertinent to the project are not answered, zero points will be given.

3.1 Congestion Relief (25 Points)
Explain if the project...

a) Provides an alternate transportation facility that corrects an identified congested problem?
   There are currently two complete east/west corridors through American Fork: 300 North and Main Street. The completion of the 700 North connection will provide an additional east/west connection and alleviate congestion on these two congested streets.

b) Reduces congestion by reducing the number of vehicles.
   A sidewalk and trail will be built along the roadway. These facilities will encourage walking and bike riding.

c) Reduces the need for additional highway lanes for peak hour capacity.
   Main Street gets very congested, especially during peak times. There are areas that are at a failing level of service during peak hour, and this additional facility will alleviate congestion on Main Street and reduce the need for additional lanes.

d) Increases the efficiency of transportation system through traffic management measures.
   The connection of 700 North from 100 East to 200 East will reduce miles travelled because it will provide a more direct route for drivers on 700 North. It will also relieve pressure on State Street and 300 North.

e) Adds turning movements to relieve a congested intersection.
   The project will reduce congestion on 300 North and State Street.

f) Design year number of users. Users include the average AADT for highways and users per day for transit, trails, and other projects.
   The design year is 2023 with an Average Daily Traffic of 9,700 vpd.

g) 2020 V/C data (computed by MPO staff)
   The 2024 V/C is 0.47.

3.2 Mode Choice (25 points)
Explain if the project...

a) Benefits multiple transportation systems (transit and highway, pedestrian and transit).
The project benefits drivers as it completes another east/west corridor through American Fork. It will be built with slopes that will allow school buses to use it, as they cannot drive on slopes greater than 7%. There will also be a sidewalk and trail built to benefit pedestrians and bicycles.

b) Promotes alternative transportation solution to SOV use.

The trail and sidewalk will promote more active transportation.

c) Creates or improves linkages between transportation modes.

The project will provide direct pedestrian access from west of 100 East along 700 North to UTA buses on North County Boulevard.

d) Reduces physical, psychological, or economic barriers to carpool, bike, walk, or transit use.

The trail and sidewalk reduce physical and psychological barriers to bike and walk since the alternative route (600 North) is prohibitively steep. It also eliminates the physical barrier (no facility there now) to continuous access along 700 North to transit use at North County Boulevard.

e) Provides incentives to carpool, bike, walk, or transit use.

This project provides a trail connection that was not previously available, providing access for bicycles and vehicles to North County Boulevard via 700 North.

3.3 Environmental Quality (15 points)

Explain if the project...

a) Provides cost effective emission reductions (amount of reduction justifies cost).

This project will alleviate congestion on 300 North and Main Street as well as reduce vehicle miles traveled by providing direct east-west access on 700 North. Furthermore, the detours around the missing segment of 700 North result in repeated acceleration and deceleration at intersections, which will be eliminated. Reducing congestion, vehicle idle time, and repeated acceleration and deceleration will reduce emissions.

b) Helps efforts to attain and maintain national air quality standards.

The alleviated congestion, reduced idling time, reduced turning movements, and reduced vehicle miles traveled will help lower the impact of vehicle emissions.

c) Minimizes environmental impacts or reduces existing impacts (e.g. air/water/noise pollution).

The project will reduce existing impacts due to reduced idling time, congestion, acceleration/deceleration and vehicle miles traveled and associated noise and air pollution.

d) Enhances the natural, cultural, or historic environment.

The reduction of existing environmental impacts will enhance the natural environment.

e) Mitigates invasive impacts to existing neighborhoods/commercial areas (minimal relocations).

700 North is being designed so that there are no conflicts with or relocations of existing homes.
3.4 Safety (20 points)
Explain if the project...

a) Corrects/improves a verified or potential safety or accident problem.
   Because 700 North is not connected, the east/west traffic uses 600 North as a connection between 100 East and 200 East. The profile of 600 North between 100 East and 200 East does not meet AASHTO standards for intersection sight distances. The average slope for this portion of 600 North is 12% (and is steeper in segments), which compromises safety of users. The intersection of 600 North and 100 East has an average of 6 accidents per year. This intersection should be signalized, but the City and UDOT would rather have a signalized intersection at 700 North and 100 East where there will be sufficient sight distances and the road profile will average 5% to 6%.

   This connection will distribute the east/west traffic more evenly taking some traffic volumes during the AM Peak Hour from 300 North where there are two elementary school crossings and one high school crossing.

b) Improves information/communications for traffic operations and emergency responders.
   Conduit will be installed in the north-south direction across 100 East for traffic operations.

c) Reduces severity of crashes.
   This project will have safer slopes and sight distances than 600 North, which will reduce the severity of crashes when vehicles don’t have to use that street to go east/west between 100 East and 200 East.

d) Enhances safe movement of pedestrian, bicycle traffic.
   The separated sidewalk and trail allows for safer travel along 700 North and will do so at a much flatter slope than exists on 600 North.

e) Provides an intermodal safety improvement (e.g. separation of vehicles-trains, vehicles-pedestrian).
   This project provides a sidewalk and trail to separate vehicles from pedestrians and bicycles.

3.5 Other Considerations (15 points)
Explain if the project...

a) Effectively distributes funding throughout the MPO area.
   This project helps distribute funding to a small-medium size community. The project will also help create a regional east/west connection, which benefits multiple communities.

b) Phases project in a manner that the MPO can use limited funds efficiently.
   700 North has been built in all areas except for this block. This is the only remaining segment, and it is a short segment, so there is no need for phasing in order to use funding efficiently.
c) Cost effectiveness is appropriate for the amount of improvement made. The project funds will greatly improve the flow of traffic in the east/west direction through American Fork and will provide a safe route of travel at a reasonable cost.

d) Benefits transportation users from adjacent municipalities. This connection will provide a direct route from 900 West in American Fork to Canyon Road in Pleasant Grove. It will provide an additional route for American Fork and Pleasant Grove to get to the Interstate as well as to get to Lehi.

e) Is supported by elected officials. The construction of this road is a priority for the Mayor and City Council. Mayor Hadfield has already hired a Real Estate Agent to secure the purchasing of the parcel where this road is to be located.
**4.0 | Air Quality Report**

All projects that are eligible for CM/AQ and CM/AQ-PM2.5 funds must complete this report (see CM/AQ Eligibility list at www.mountainland.org/tipselection). These funds are eligible for projects and programs countywide.

**4.1 Eligibility**

CM/AQ funds can only be used for projects and programs that a direct benefit to air quality can be demonstrated. Highway expansion, such as new single occupancy vehicle lanes, is not eligible. Turn lanes at congested intersections, transit programs, pedestrian and trail projects, signal modernization, ITS, and IM programs are typical eligible CM/AQ projects.

**4.2 CM/AQ Program**

The purpose of the CM/AQ program is to fund transportation projects or programs that will contribute to attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) in Ozone (O₃), Carbon monoxide (CO), Particulate Matter – 10 microns (PM₁₀), and PM₂.₅ non-attainment and maintenance areas. The city of Provo is a maintenance area for CO and Utah County is a non-attainment area for PM₁₀ and PM₂.₅.

**4.3 Completing this Report**

All projects eligible for CM/AQ funds must complete this report. Completing this report can be quite technical, Susan Hardy, Air Quality Coordinator at Mountainland, can help with filling out this report. Contact her at 801/229-3842 or shardy@mountainland.org

**4.4 Quantitative Analyses**

A quantitative assessment of how a proposed project or program is expected to reduce emissions is important to assist in selecting the most effective use of this fund. List below all travel benefits directly related to this project. Air quality benefit calculations must utilize Mobile 6. The air quality analysis should include assessing emission reductions of transit, traffic flow improvements, ITS projects and programs, ridesharing, bicycle and pedestrian improvements. Complete at least one of the sections below. If quantitative analyses cannot be done, do a qualitative assessment in 4.3.

**a) Vehicle Miles Traveled**

Number of Vehicle Miles Traveled reduced (VMT): [Click here to enter text.](#)

Average distance of trips reduced: [Click here to enter text.](#)

Emission reduction per average weekday: [Click here to enter text.](#)

**b) Idling Time**

Average idling time per vehicle reduced: [Click here to enter text.](#)

Number of vehicles with reduced idling time: [Click here to enter text.](#)

Emission reduction per average weekday: [Click here to enter text.](#)

**C) Vehicle Speed**

Average change in vehicle speed (speed before and after): [Click here to enter text.](#)

Number of vehicles affected: [Click here to enter text.](#)

Emission reduction per average workday: [Click here to enter text.](#)
4.5 Qualitative Assessment
Although a quantitative analyses of air quality impacts is required whenever possible, some improvements may not lend themselves to rigorous quantitative analysis, because of the projects characteristics or because practical experience is lacking to adequately analyze the project. In these cases, a qualitative assessment based on a reason and logical examination of how the project or program will decrease emissions and contribute to attainment or maintenance of a NAAQS is appropriate.
This project will complete an additional regional east/west connection and will lower travel times to Lehi and the interstate for those in northern Pleasant Grove and American Fork. 700 North will also alleviate congestion along 300 North and State Street which will decrease idling time. The decreased travel times, alleviated congestion, and decreased idling time will have positive air quality impacts and decrease emissions.
5.0 | Project Cost Estimate

To develop a project cost estimate, please supply a detailed cost breakdown of your unit costs, inflation, equipment, right-of-way, contingency, etc. To do so, use the Concept Costs Estimate Excel form provided by UDOT (available at www.mountainland.org/tipselection). Non-construction projects such as equipment purchases, operations, administration programs, studies, etc. can use other methods to show their estimated costs. All sheets or methods used should be submitted as part of the Supplemental Information accompanying the Concept Report.

5.1 Cost Summary

Summarize the information from the Costs Estimate Excel form or other method. Enter NA for items that do not apply to the project.

a) Preliminary Engineering $74,000
b) Environmental Work $43,900
c) Construction $924,000
d) UDOT Review (project cost <$500k = $5k, >$500K = $10k) $10,000
e) Construction Engineering $93,000
f) Subtotal $1,621,000
g) Inflated Cost Factor (inflate to year of construction) 1.21%
h) Total Project Cost (enter total cost, not funding request)) $1,923,000
i) Additional Funds (less local match) Available to Project $250,000 from UDOT for a signal and $272,000 from American Fork by the purchase of the parcel that 700 North will travel through.
j) MPO Federal Funds Request (includes 6.77% local match) $1,401,000

6.0 | Supplemental Information

Please submit any supporting documentation including maps, diagrams, charts, cost estimates, etc. that will allow MPO and UDOT staff and any Technical Advisory Committee to make an informed decision regarding the proposed project. **Keep Supplemental Information submittals to 8 pages total.**

6.1 Concept Report Submittal

In order to facilitate the distribution of the Concept Reports and any supplemental information, all Concept Reports with leadership signature, shall be combined with any supplemental information and saved in PDF format as one document. Please note that this might create a large data file that might be too large to emailed. Plan accordingly to submit your report in electronic format (CD, DVD, Flash Drive) by the required due date. **Concept Reports are due by Thursday 03/24/2016 at 6pm.**

6.2 Contacts, Questions

For help with the Concept Report or questions, please contact:

Bob Allen, AICP
586 East 800 North, Orem UT 84651
p.801/229-3813 f.801/229-3801
email ballen@mountainland.org

Shawn Eliot, AICP
586 East 800 North, Orem, UT 84097
p.801/229-3841 f.801/229-3801
### Proposed Project Scope:

| Approximate Route Reference Mile Post (BEGIN) = | 1.350 |
| Project Length = | 0.140 miles |
| Current FY Year (July-June) = | 2016 |
| Assumed Construction FY Year = | 2020 |
| Construction Items Inflation Factor = | 1.21 |
| Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) = | 3.0% |
| Assumed Yearly Inflation for Right of Way (%/yr) = | 3.0% |
| Items not Estimated (% of Construction) = | 20.0% |
| Construction Engineering (% of Construction + Incentives) = | 10.0% |

### Construction Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Information Services</td>
<td>$4,000</td>
<td></td>
</tr>
<tr>
<td>Roadway and Drainage</td>
<td>$462,493</td>
<td></td>
</tr>
<tr>
<td>Traffic and Safety</td>
<td>$259,500</td>
<td></td>
</tr>
<tr>
<td>Structures</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Environmental Mitigation</td>
<td>$43,894</td>
<td></td>
</tr>
<tr>
<td>ITS</td>
<td>$500</td>
<td></td>
</tr>
</tbody>
</table>

Subtotal: $770,387
Items not Estimated (20%): $154,077
Construction Subtotal: $924,464

**P.E. Cost**

P.E. Subtotal: $74,088 (8%)

**C.E. Cost**

C.E. Subtotal: $92,610 (10%)

**Right of Way**

Right of Way Subtotal: $276,800

**Utilities**

Utilities Subtotal: $150,000

**Incentives**

Incentives Subtotal: $1,637

**Miscellaneous**

Miscellaneous Subtotal: $0

### Cost Estimate (ePM screen 505)

<table>
<thead>
<tr>
<th>Item</th>
<th>2016</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.E.</td>
<td>$74,000</td>
<td>$83,000</td>
</tr>
<tr>
<td>Right of Way</td>
<td>$227,000</td>
<td>$312,000</td>
</tr>
<tr>
<td>Utilities</td>
<td>$150,000</td>
<td>$181,000</td>
</tr>
<tr>
<td>Construction</td>
<td>$924,000</td>
<td>$1,118,000</td>
</tr>
<tr>
<td>C.E.</td>
<td>$93,000</td>
<td>$105,000</td>
</tr>
<tr>
<td>Incentives</td>
<td>$2,000</td>
<td>$2,000</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>0.75%</td>
<td>$7,000</td>
</tr>
<tr>
<td>Change Order Contingency</td>
<td>9.00%</td>
<td>$84,000</td>
</tr>
<tr>
<td>UDOT Oversight</td>
<td>$10,000</td>
<td>$12,000</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

TOTAL: $1,621,000 TOTAL: $1,923,000

### Project Assumptions/Risks

1  
2  
3  
4  
5  
6  
7  
8  
9  
10 
11 
12 
13 
14